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United States
Department of
Agriculture

Economic
Research
Service

RS-86-9
July 1986

Sub-Saharan Africa

Situation and Outlook Report

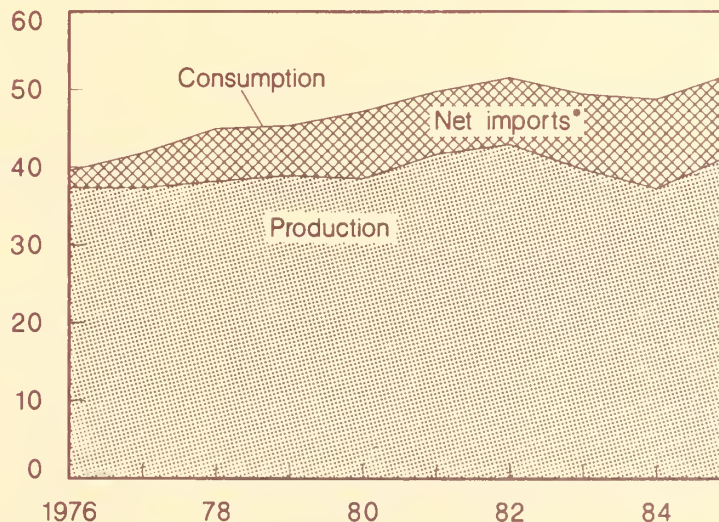
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**Total Grain Consumption, 1976-85,¹
Sub-Saharan Africa**

Million tons



• Also includes changes in stock. 1/ Excludes South Africa

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Note: In this report, all tons are metric and all dollars U.S. unless specified otherwise.

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Approved by the World Agricultural Outlook Board. Summary released July 14, 1986. The *Sub-Saharan Africa Situation and Outlook Report* is one of 10 regional reports. Other titles in the series: Western Europe, USSR, China, East Asia and Oceania, South Asia, Southeast Asia, Western Hemisphere, Eastern Europe, and the Middle East and North Africa. Annual subscriptions and single copies are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. For ordering and pricing information, call the GPO order desk at (202) 783-3238.

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SUMMARY

Food crop production in Sub-Saharan Africa made a spectacular recovery in 1985 as good weather followed severe drought. Crops set records in Burkina, Chad, Somalia, Sudan, Kenya, and Zimbabwe. Favorable weather was the key to both higher yields and expanded area. Also, in many countries, governments have increased official producer prices to bolster incentives to farmers. Free market prices, more important than official prices in many areas, rose sharply during drought-induced shortages and probably spurred some of the area increase. Exceptions to the dramatic crop improvements were Botswana, Angola, Mozambique, and Ethiopia. Although the region's aggregate output rose, some localized droughts occurred.

The outlook for 1986 production is generally favorable, but harvests in much of the region will depend on rainfall in the second half of the year. In Southern Africa, estimates place output close to last year. The rainy seasons in East and West Africa got off to good starts, although locusts and grasshoppers could pose a threat to crops.

The unprecedented food emergency that had enveloped much of the region early in 1985 subsided by the end of the year, with large imports also boosting supplies. However, serious problems remain in many areas in 1986. While the region's overall supplies are currently abundant, distribution is far from even among and within countries. Angola, Ethiopia, Mozambique, and Ethiopia continue to face food emergencies. Despite a national surplus, large local deficits persist in Sudan. The increase in the region's aggregate food supplies has not been sufficient by itself to alleviate chronic consumption and nutrition weaknesses.

Sub-Saharan Africa remains in the midst of a severe economic crisis. As export earnings have fallen and debts have risen, it has become increasingly difficult for the region's governments to obtain the external financing needed for future growth. Many African countries have already adopted sweeping reform programs aimed at promoting growth. Common measures being undertaken include devaluation, price policy reforms, decreasing government intervention in markets and trade, and reductions in budget deficits. Often, international donors are requiring such reforms for further credit.

Overall export earnings for Sub-Saharan Africa are expected to slip in 1986, with prices for most of the region's commodity exports level or declining. Lower prices for petroleum, the region's most important export by far, will have a major impact, particularly in Nigeria. Oil-importing countries will realize savings, but these will be outweighed by the losses of the exporters. Falling cotton prices have coincided with a strong turnaround in production in many countries. Some of the region's coffee exporters will realize substantial earnings gains, though, because of favorable prices and higher exports, following the suspension of International Coffee Organization quotas.

In 1985, Sub-Saharan Africa imported over 12 million tons of grain. This was only 10 percent below the previous year's record level. Wheat imports made up almost 50 percent of the total. Rice and corn accounted for 22 and 15 percent, respectively. The EC has emerged as the major agricultural supplier, supplying the region with one-third of its import needs since 1980. The United States has held only a 15-percent share.

Agricultural imports in 1986 will fall because of the production recovery and financial pressures. Some of the larger importers are diverging from their recent buying patterns. Nigeria, the largest importer in the region, has banned imports of corn, rice, and vegetable oils. South Africa stopped importing corn as production recovered enough in 1985 to allow it to resume exports. Sudan, which imported approximately 1.5 million tons of grain in 1985, is reducing imports substantially.

For fiscal 1986, U.S. agricultural exports to Sub-Saharan Africa are forecast at slightly over \$800 million, a 36-percent decline from the near-record \$1.3 billion in 1985. Most of the decrease is in grain, because of both lower import requirements and lower world prices. The value of U.S. coarse grains exports is forecast to decline by 85 percent, primarily because South Africa has stopped buying and Nigeria has reduced imports. The value of U.S. rice exports to the region is expected to fall by more than 30 percent. The value of U.S. exports of wheat and wheat products will drop about 25 percent, but wheat will remain the top export to the region, accounting for more than 40 percent of the total.

FOOD PRODUCTION RECOVERS FROM DROUGHT

Food crop production in Sub-Saharan Africa made a spectacular recovery in 1985, following a year of severe drought. Many countries harvested record crops, with good weather the primary factor in higher yields and expanded area. Cereal output rose 33 percent to 60.5 million tons. Per capita cereal production rose 29 percent to 132 kilograms.

The largest gains occurred in those regions most affected by drought in 1984. Cereal production rose 70 percent in the Sahel, 48 percent in East Africa, and 36 percent in Southern Africa. Despite the desperate need for these good crops following 2 to 3 years of drought in most countries, the bumper crops created some problems as marketing systems struggled to absorb huge surpluses.

Record Crops in Many Countries

Record crops were harvested in Burkina, Chad, Somalia, Sudan, Kenya, and Zimbabwe. Sudan grew a record 4.5 million tons of sorghum and millet, more than triple the drought-reduced harvest of 1984. Higher yields and large increases in mechanized farm area account for the recovery. Kenya's 1985 cereal output increased nearly 60 percent from 1984. Zimbabwe harvested a record cereal crop, following 3 consecutive years of drought. South Africa's corn output rose 75 percent in 1985.

Sub-Saharan Africa total grain production

Year	Sahel	West	Central	East	South	Total
1000 tons						
1980	5,037	13,138	1,293	14,150	19,407	53,025
1981	5,571	13,272	1,292	16,070	25,617	61,822
1982	5,163	13,882	1,331	15,631	17,839	53,846
1983	4,815	11,144	1,342	14,798	11,856	43,955
1984	3,737	14,144	1,376	12,493	13,656	45,406
1985	6,352	15,634	1,427	18,524	18,570	60,507

Sub-Saharan Africa per capita grain production

Year	Sahel	West	Central	East	Southern	Sub-Sah. Average
kilograms						
1980	162	98	54	117	266	133
1981	174	96	33	129	342	155
1982	157	98	33	121	232	128
1983	142	77	32	111	150	102
1984	107	95	32	91	168	102
1985	177	102	33	132	222	132

Excluding South Africa, grain production in Sub-Saharan Africa reached a record last year—50.5 million tons, 14 percent above the previous peak in 1981.

Exceptions to the dramatic crop improvements were Botswana, Angola, Mozambique, and Ethiopia. However, even these countries achieved production gains in 1985, but at more modest rates.

In Botswana, drought persisted for a fifth year. Agricultural production in Angola and Mozambique continues to be constrained by civil strife, input shortages, and massive disruptions of marketing and distribution systems. Angola's cereal output rose only marginally, despite favorable weather. Good weather helped increase Mozambique's cereal output from drought-reduced levels of 1983 and 1984, but production remains only about 70 percent of the harvests of the mid-1970's. Grain marketed through official channels in Mozambique in 1985 reached its lowest level since independence in 1975.

Although weather improved in most parts of Ethiopia in 1985, recovery was poorer than anticipated. Six of 14 administrative areas, mostly in the mid-southern region, received inadequate or poorly distributed rainfall. Preliminary crop estimates were revised downward to 5.2 million tons, less than 10 percent above the disastrous 1984 crop. Some factors in Ethiopia's slow recovery are related to the 1984 drought: seed shortages, population dislocation, and loss of draft animals.

Although Sub-Saharan Africa's aggregate output rose, some localized droughts occurred in 1985. Northern Burkina suffered a severe drought for the third consecutive year in 1985. In parts of Guinea, localized flooding was followed by localized drought. Despite the national surplus, large local food deficits persisted in Sudan, mainly in the poorer agricultural areas in the west and north.

Producer Price Trends

Nominal producer prices for food crops have risen substantially in most Sub-Saharan countries, reflecting the key role of increased producer price incentives in African economic policy during the 1980's. For instance, between 1980 and 1985, the nominal producer

price (in local currency) for corn rose 420 percent in Tanzania, 142 percent in Zambia, and 94 percent in Kenya. Official producer prices for rice rose 113 percent in Nigeria, 105 percent in Senegal, nearly 90 percent in Mali, and 60 percent in Ivory Coast.

Despite these increases, average annual cereal production in Sub-Saharan Africa fell 9 percent between 1979-81 and 1983-85. The producer response to rising food crop prices has been moderated by several factors,

Selected producer prices, 1980-85						
	1980	1981	1982	1983	1984	1985
	Price/ton					
Ivory Coast CFA franc						
Rice	50,000	60,000	60,000	60,000	80,000	80,000
Corn	—	—	40,000	40,000	40,000	40,000
Senegal CFA franc						
Rice	41,500	51,500	51,500	60,000	66,000	85,000
Kenya K. Shilling						
Corn	1,000	1,055	1,444	1,600	1,733	1,944
Zambia Kwacha						
Corn	130	150	178	203	272	315
Zimbabwe Dollar						
Corn	85	120	120	120	140	180
South Africa Rand						
Corn	115	115	134	168	215	215
Wheat	209	233	286	266	289	312
Nigeria Naira						
Corn	200	210	210	210	360	500
Millet	220	231	231	231	360	500
Rice	329	340	400	400	500	700
Tanzania T. Shilling						
Corn	1000	1500	1750	2200	4000	5200

	\$/ton					
Ivory Coast Rice	235	221	183	158	183	178
Corn	—	—	152	105	92	89
Senegal Rice	196	190	157	158	151	189
Kenya Corn	135	117	132	120	120	118
Zambia Corn	165	173	192	163	152	116
Zimbabwe Corn	132	174	159	119	113	112
South Africa Corn	148	132	124	151	150	98
Wheat	268	268	265	239	201	151
Nigeria Corn	366	342	312	290	468	562
Millet	403	376	343	319	468	562
Rice	602	554	594	553	650	787
Tanzania Corn	122	181	189	197	262	298

including inflation, poor weather, weak marketing institutions, and shortages of complementary inputs, especially rural labor, needed to expand area.

Inflation Lowers Real Producer Prices

The high rates of inflation in most Sub-Saharan countries caused real official producer prices to increase at rates substantially below nominal prices. In many countries, prices actually declined in real terms. Selected official price data for major countries and crops show that real prices stagnated or fell for most of these cereal crops between 1980 and 1985. Most official price hikes therefore provided weak incentives to farmers, as price increases were overtaken by other developments in African economies.

Free Market Prices Important

Official producer prices are of varying importance in African countries, depending on the proportion of cereal crops that is marketed through official agencies. Official prices are more important in east and southern Africa, particularly in Kenya, Zimbabwe, Zambia, and South Africa, where more than 20 percent of cereal output is marketed through official channels. In most other African countries, however, only a small portion of domestic grain production is marketed, and an even smaller portion is sold through official agencies. Free market grain prices are in general more important than official prices in farm production decisions in these countries.

In many countries, free market prices rose sharply from 1982 to 1984 because of drought-induced food shortages. Higher free market prices in recent years probably account for some of the increase in area planted during this period, despite falling real official prices in many countries.

Falling Prices And Large Surpluses Strain Marketing Boards

In many countries, free market prices fell below official prices following good harvests in 1985. In countries with grain marketing boards, this reversal prompted farmers to shift grain sales to the government, straining the institutions' physical and financial capabilities. Storage capacity has generally been inadequate to handle bumper crops.

For several countries, heavy government purchasing resulted in high costs to finance purchases and storage. Marketing agencies also took losses because export markets were limited or the world price was too low. Both eastern and southern African marketing boards

have experienced expensive disposal problems in 1985 and 1986.

Kenya's grain marketing board was swamped last year by farmers' offerings, causing the Government to issue permits for direct grain sales by farmers to millers. In Tanzania, marketing through official channels rose 40 percent by August 1985, reflecting the fact that official and free market corn prices were within 2 percent of each other in corn surplus areas.

Although marketing remains orderly in Zimbabwe, the combination of higher producer prices and increased output raised the government's costs substantially. The value of crop sales to the Government in the first 6 months of the 1985/86 marketing year jumped 48 percent from a year before. The marketing parastatal had to increase its borrowings by over \$200 million to finance these purchases. The huge stockpile of over 1 million tons has been expensive for Zimbabwe to finance because of high interest rates.

Some countries with relatively small government marketing roles also experienced difficulty in handling 1985 harvests. Bumper harvests that came on the heels of record commercial and aid imports to meet 1984 crop failures resulted in large carryover stocks. In some countries delayed imports continued to enter after the harvests began.

Large import stocks and bumper harvests have destabilized purchasing programs such as those in Mali and Burkina. Both countries purchased grain at the relatively high post-harvest price in 1984/85, intending to sell it as prices rose later in the season. Domestic purchases were augmented by imports and large farmer offerings in 1985/86. But falling 1985/86 grain prices threaten to financially squeeze these agencies as they sell grain at a loss. Impending government sales are also creating uncertainties in the grain markets over future prices.

In Nigeria, a combination of drought and food import restrictions kept domestic food prices above official levels in 1985. Market prices should rise further in 1986, following the October 1985 ban on corn and rice imports and the January 1986 ban on vegetable oil imports. The Government is in the process of abolishing all marketing boards. Minimum

Trends in real producer prices, area and yields

	Real producer price change 1/ (1980-85)	Area change (1979-1981 to 1983-1985)	Yield change (1979-1981 to 1983-1985)
	Percent		
Benin			
Corn	—	18	6
Ghana			
Corn	15	11	4
Ivory Coast			
Rice	22	18	9
Corn	-26	24	0
Millet	—	27	-28
Sorghum	—	16	-2
Mali			
Rice	13	-28	21
Millet	-5	-20	9
Corn	-5	15	0
Nigeria			
Wheat	-26	60	-13
Rice	-17	23	4
Millet	-12	0	-3
Corn	-3	7	4
Senegal			
Rice	17	-17	47
Millet	0	-2	-7
Corn	8	21	14
Cameroon			
Rice	—	33	50
Millet/sorghum	—	-4	3
Corn	—	-4	25
Ethiopia			
Wheat	-31	11	-3
Sorghum	—	-3	-25
Corn	—	-3	17
Barley	-32	4	-18
Kenya			
Wheat	9	-10	-1
Sorghum	-3	-24	1
Corn	4	4	14
Somalia			
Sorghum	—	-1 2/	3 2/
Corn	—	22 2/	22 2/
Tanzania			
Wheat	0	22	-12
Rice	26	67	-41
Corn	43	9	0
Millet	-27	48	-40
Sudan			
Wheat	—	-47	23
Millet	—	22	-36
Sorghum	—	37	-31
Corn	—	0	-2
Malawi			
Rice	-10 3/	-5 3/	-13 3/
Corn	1	10	7
South Africa			
Wheat	-26	5	-5
Corn	-7	-8	-48
Zambia			
Corn	6	-4	26
Zimbabwe			
Wheat	3	-29	17
Sorghum	-17	63	-41
Corn	3	20	-20

— =Not available. 1/ Real producer price calculated as nominal producer price in local currency, divided by CPI. 2/ Change in area and yield from 1981-83 to 1983-85, change in producer price from 1981-85. 3/ Change in area and yield during 1979/81 to 1982/84, change in producer price from 1980-84.

guaranteed prices will be maintained, but the states will be responsible for enforcing the prices. Currently, the states do not have the institutions or resources to carry out this function.

Official Price Hikes To Moderate in 1986

Official producer price increases are expected to moderate in most countries in 1986, to keep producer prices in line with falling free market prices, to lessen the relative costliness of domestic cereal production, and to minimize cereal export losses.

When official producer prices are higher than world prices the implied subsidy to domestic production increases. In Ivory Coast, for example, the 1985 producer price for rice was \$178/ton and \$211 delivered to the mill, compared with an average 1985 price of \$210/ton for rice imports. Ivory Coast's intensive efforts to promote domestic rice production have been squeezed by world market conditions. In 1980, the Government cut the rice producer price 25 percent because total production costs, including free seed and improved credit, proved too expensive relative to the world price.

Several Sub-Saharan countries resumed cereal exporting following the 1985 bumper harvests, but their high producer prices relative to world prices meant they exported at a loss. Kenya's producer price for corn was \$118 per ton in 1985, Zimbabwe's \$112 and South Africa's \$98, compared with an average U.S. price of about \$92. In 1986, corn prices in Kenya and South Africa were increased at rates below inflation to help stem export losses. Zimbabwe's 1986 producer price was unchanged from 1985.

Currency Movements Have Mixed Price Effects

One result of the devalued currencies of some Sub-Saharan countries is that the gap between rising domestic prices and falling world grain prices is narrowed. The rise in domestic producer prices was moderated in dollar terms during the 1980's as exchange rates fell. This has had the effect of reducing the costliness of domestic production relative to imports. The higher dollar cost of imported

cereals also acts as a stimulus to domestic production. For Africa's few net grain exporters, local currency depreciation makes their export surpluses more competitive (or less uncompetitive) with the world market.

By contrast, the CFA currency of many West African countries is tied to the French franc and began to appreciate in early 1985. As the dollar depreciates, countries such as the Ivory Coast experience higher comparative costs of production. As the local currency costs of cereal imports fall, cheap imports undercut sales of domestic production. These price effects intensified in early 1986 when the dollar began its very sharp drop against European currencies and the yen. West African producer prices in 1986, even if unchanged in local currencies from the previous year, will rise in dollar terms. Because CFA countries cannot control their exchange rates, compensating fiscal and pricing policies will have to be adopted.

Cereal Area Expands in 1980's

Available data on cereal area and yields are weak, and can only be considered indicative of broad trends. The following discussion of area and yield trends is based on the major crop(s) of selected countries whose statistics are judged to be among the more reliable.

Cereal area expanded in most countries during 1980-85, despite the mixed trends in real official producer prices. Official cereal prices appear not to have exerted a significant effect on area planted. Real official price and crop area increased or fell together in only 12 of the 30 examples where both official price and crop area data are available. This does not necessarily indicate that price has not been an important determinant of area. Recent increases in area in many countries probably reflected rising free market prices following drought in 1983 and 1984.

Annual variations in area planted are related to weather during the current growing season. Data for 44 major crops produced in 16 African countries show that area of most crops increased during years of good weather—such as 1981-82 and 1985. Area dropped sharply in the 1983 drought. Increased area planted during Africa's disastrous 1984 season is mostly accounted for

Annual movements in area and yields for cereal crops ¹

	1980	1981	1982	1983	1984	1985
Number of crops where area increased	20	26	26	18	22	34
Number of crops where yield increased	19	25	18	9	23	29

^{1/} Data are for 44 major cereal crops produced in 16 selected countries from previous table.

by west African countries, where weather was favorable, or by crops whose production was supported by government programs. In 1985, good weather conditions at planting time persuaded many farmers to expand area planted.

Many other factors probably influenced the recent trends in cereal area. In Sudan, the 29-percent increase in total area planted to cereals between 1979-81 and 1983-85 partly reflects a heavy Saudi subsidy for sorghum exports, and Arab investment in the country's large mechanized farms. It also reflects the hefty, 44-percent increase in cereal area in 1985, when farmers responded to high 1985 food prices and good planting conditions. Zimbabwe's 29-percent increase in total cereal area during the 1980's partly represents recovery of agricultural production from the disruptions of war in the late 1970's. The government has also improved its services to small-scale farmers. In 1985, total cereal area in Zimbabwe increased 10 percent from 1984's drought contracted level.

Cereal area in Mali rose nearly 40 percent in 1985 because of good weather and high prices, but area planted was still below that of the early 1980's. Ivory Coast has registered steady increases in cereal area during the 1980's. Rice production has benefited from an increased producer price and good government support services.

Yields Generally Rise in 1980's

Between 1979-81 and 1983-85, average yields of major cereal crops rose in most countries. In general, yield increases were recorded for wheat, rice, and corn, with declining yields for millet and sorghum. However, corn yields fell in the two major producing countries, South Africa and Zimbabwe, because of severe drought in 1983 and 1984. Total Sub-Saharan millet/sorghum output, and corn from these two leading

producers, accounted for an average 70 percent of Sub-Saharan grain output during 1980-85. Their poor performance caused aggregate cereal production in Sub-Saharan Africa to fall 9 percent from 1979-81 to 1983-85, more than offsetting gains in both area and yield for some crops.

Yields for corn, millet, and sorghum are more vulnerable to weather than are rice and wheat. The latter are grown in areas of less rainfall variability and in many countries benefit from intensive government programs to increase yields and output. Less than 3 percent of Africa's agricultural land is irrigated, with Sudan and South Africa combined accounting for more than one-half of that total. Because most cereal production is rainfed, yields are subject to the highly variable weather conditions. Drought in many countries during 1982-84 accounted for much of the recent decline in crop yields. In particular, South Africa, Zimbabwe, and Tanzania registered declines of 40 to 50 percent in some crop yields during 1979-81 to 1983-5 because of severe drought in the latter period time.

Expansion in area is sometimes associated with declining yields, when production expands into marginal farmland. In Tanzania, for instance, sizable increases in area occurred for all crops, but average yields for wheat, rice, and millet fell, while corn yields stagnated from 1979-81 to 1983-85.

The increase in corn yields in some countries, despite drought, is due to various factors. In Senegal, yields rose with improved inputs. The increase in Ethiopia's corn yields may reflect the impact of its major fertilizer program. The apparent rise in Kenya's corn yields is due to severe drought during the base year time period.

There are some exceptions to the greater-area, lesser-yields pattern, particularly in countries that have supported increased plantings with the provision of other inputs. In Ivory Coast and Cameroon, for example, both area and yield of rice rose, reflecting their intensive and expensive efforts to expand this import substitute. Area and yields of both rice and corn in Nigeria have risen steadily, because of increased fertilizer use, as have those of corn and wheat in Kenya.

Generally, African yields remain low, ranging from 20 to 70 percent of world averages. African farmers usually obtain sorghum yields of 0.6 to 0.9 tons per hectare and millet yields rarely go above 0.5 tons per hectare, far below their agronomic potential of 3-4 tons per hectare. This results from the predominance of traditional cultivation techniques, with little use of modern inputs. In general, therefore, annual yield variations reflect weather conditions rather than changes in input use.

In 1985, average corn yields nearly doubled in Zimbabwe to 2.01 tons per hectare. South Africa's corn yield increased 75 percent to 1.9 tons per hectare. Millet and sorghum yields in Sudan nearly doubled. Yield responses to good weather were less marked in other regions in 1985, probably reflecting the expansion of area planted into marginal farmland.

Root and Tuber Output Rises

Root and tuber production, including cassava, yams, plantains and sweet potatoes, rose 7 percent in 1985 to 94 million tons. Production did not change as dramatically as cereals. This stable performance reflects the fact that roots and tubers, particularly yams, are grown in areas with higher rainfall. Also, cassava is drought-resistant. While root and tuber crops are grown throughout Sub-Saharan Africa, they are particularly important in Central and some West African countries, where they account for a far greater

proportion of caloric intake than do cereals. In recent years consumption trends show a gradual substitution of cereals for these traditional food crops. The trend is associated with:

- o urbanization
- o a supply constrained by inadequate marketing and distribution of these highly perishable crops
- o producer price movements that appear to favor cereals
- o the increased availability of imported cereals, and,
- o in the past, lower relative retail prices of subsidized cereals.

Livestock Recovery Begins

Good rains improved pasture conditions in 1985 and helped the traditional livestock sector of Sub-Saharan countries to begin the long process of recovery from several years of drought (see box article on livestock).

Livestock production in Sub-Saharan Africa is mainly carried out in the traditional sector. In most regions of the continent, cattle and some goats and sheep are produced under a seminomadic system in which herds are moved seasonally in search of water and pasture. Some small-scale production of goats, sheep, and chickens is undertaken on family farms. Modern dairy, beef and poultry production is expanding, but it still represents only a small proportion of Africa's total output of meat, milk, and eggs.

In the Sahel, good weather permitted cattle herd rebuilding and the return of herds that migrated to neighboring countries in search of pasture and water. Losses of Sahelian herds due to the 1982-84 drought are unknown, but are probably about one third--the same as during the 1973-75 drought. In some areas, the greatly expanded crop area blocked and delayed the passage of returning herds. Livestock prices began to rise in 1986 as good grain harvests boosted farm income and the demand for meat and livestock. Price increases are likely to be moderated, however, by slow economic growth in Ivory Coast and Nigeria, the major regional markets for Sahelian livestock exports.

The major livestock producers in East Africa are Ethiopia, Sudan, and Kenya. In

Root and tuber production, 1980-85 1/

	1980	1981	1982	1983	1984	1985
	1,000 tons					
Ivory Coast	5,143	4,951	5,324	5,135	5,015	5,755
Nigeria	34,360	33,152	33,375	29,445	33,480	36,200
Other West Africa	12,817	12,627	12,260	11,367	12,962	13,865
Central Africa	15,467	16,262	16,900	17,007	16,724	17,470
East Africa	18,051	19,119	19,654	20,244	19,981	20,805
Total	85,838	86,111	87,513	83,198	88,162	94,095
	Kilograms per capita					
Ivory Coast	623	576	595	551	517	570
Nigeria	385	360	352	305	339	356
Other West Africa	309	295	279	247	279	290
Central Africa	409	420	423	415	398	404
East Africa	237	244	242	241	230	232

1/ Includes cassava, sweet potatoes, yams, cocoa yams, and plantains, where production is significant.

Ethiopia, rangelands in most areas improved in 1985 and milk production recovered sharply. However, continued dry conditions in eastern Ethiopia resulted in herd movements into Somalia early this year. Cattle serve an important role in Ethiopia as farm draft animals. Sudan's meat production declined during 1982-84 as drought reduced herd sizes

and slaughter weight. Good weather during 1985 should help the recovery of this sector, which accounts for nearly 10 percent of Sudan's gross domestic product (GDP).

In Kenya, livestock marketing fell sharply in 1985 from the high levels of 1984. The low slaughter rate indicates herd rebuilding

DROUGHT AND THE CYCLE OF LIVESTOCK RECOVERY

Most cattle in Sub-Saharan Africa are produced under a traditional, seminomadic system in which herds are trekked to new pasture and water sources as the seasons change. Herders have traditional ways of coping with moderate drought that allow most of the breeding herds to remain intact. In a dry year, the less productive animals in the herd are sold and the rest are moved to higher rainfall regions.

The consequences become much more serious after 2 or 3 consecutive drought years. In many cases, herders are forced to sell the reproductive females rather than let them die. A survey done at a slaughterhouse in Niamey, Niger during the 1973 drought, found that 70 percent of the slaughtered stock were females, compared with 30 percent in normal years. In the Sahel, during prolonged drought, the herds are frequently moved further south than normal, entering the tse-tse fly zone, where diseases are prevalent.

The high slaughter rates in drought years lead to a shift in the relative prices of grain and meat. The revenue from the sale of an animal during a drought year will buy only a fraction of the grain that it will buy during a good year. In early 1985, a prime male export animal in the Sahel was selling for only 15,000 CFA (\$31.00), which would buy only 100 kilograms of millet. The current price is about 150,000 CFA (\$416.00), or 3,000 kilograms of millet. This means that as a herder's dependence on grain increases, his ability to pay decreases.

Moreover, not only does the price per kilogram of animal weight drop during a drought, but the carcass weight also falls sharply because the animal has endured stress. In Niamey, the average weight of cattle slaughtered dropped from 113 kilograms

during March-June 1982 to 78 kilograms 3 years later, following the drought. At the same time, the number of animals slaughtered almost doubled.

In the Sahel, the 1985 collapse of the livestock market was caused not only by drought but also by developments in Nigeria and Ivory Coast, the region's major export markets. Nigeria closed its borders to all imports in 1984, making movement of animals into the country much more difficult. The disruption of meat exports from the Sahel during the herd rebuilding of the late 1970's had caused Ivory Coast to rely more heavily on imports from outside the region. The Sahel never fully recaptured this market when the 1985 drought began.

The livestock recovery which began in Sub-Saharan Africa in late 1985 will be very slow if the process proceeds as it did in the 1970's. It is difficult to estimate how long the recovery will take because the extent of the losses is still unknown. Not all of the animals died or were slaughtered; some were moved to neighboring countries and should return. Although the size of the herd is difficult to estimate, there definitely will be fewer breeding animals, poor nutrition will result in lower calving rates, and the reduced number of herders available will mean poorer herd management.

If 30 percent of the herd was lost during 1983-85, recovery will take about 10 years, assuming no recurrence of major drought. During this time, meat supplies will be reduced and result in higher prices. The price of beef in Niger rose from 450 CFA per kilogram in early 1985 to 600 at the end of the year. Prices this year could go as high as 900 CFA. [Margaret Missiaen (202) 786-1680]

following a 25-to-30 percent loss in the 1984 drought. Kenya's milk production also began to recover in 1985.

The Somalian economy is heavily dependent on livestock exports, many of them unrecorded. In recent years exports have been hurt by Saudi Arabian claims of cattle disease and by increased competition in international meat markets. This has resulted in the loss of Somalia's important export markets in Saudi Arabia and Qatar. In response, Somalia has stepped up efforts in animal health and marketing.

In Southern Africa, continued drought in Botswana has prevented recovery of livestock production. Improved weather in Zimbabwe has permitted some herd rebuilding. Zimbabwe's herd size still declined in 1985, but breeding stock numbers began to rise and the herd slaughter rate fell. With lower meat availability, domestic beef supplies had to be rationed to meet Zimbabwe's export commitments. In South Africa, beef production dropped about 4 percent in 1985 as the high slaughter rates during the 1983 and 1984 droughts began to decline. Livestock prices remain weak because of very low income growth, while costs including feed have risen sharply, with inflation at nearly 20 percent. Range conditions improved in 1985 except in some areas such as the Northern Transvaal.

Changing Fertilizer Policies

Little data are available on the use of inputs such as fertilizer, hybrid seeds, and farm equipment, reflecting their low use in food crop production in most Sub-Saharan countries. In many countries inputs are distributed by public agencies, frequently at subsidized prices or free. But these subsidies are gradually being reduced or eliminated in the context of economic reform programs, and their distribution is being left to the private sector.

In Nigeria, fertilizer policy is expected to change rapidly in the next few years as subsidies are phased out, World Bank financing of imports ends, and construction of Nigeria's nitrogenous fertilizer plant is completed. The focus will shift to local manufacture with imported raw materials, including private distribution at unregulated prices.

In Ivory Coast, the reduction in Government fertilizer subsidies caused sales of locally produced fertilizer to fall almost 20 percent to 35,000 tons. The elimination of fertilizer subsidies in 1986 is likely to reduce locally produced fertilizer use further. However, Ivorian fertilizer imports rose 17 percent in 1985 to 130,000 tons. Most fertilizer is applied to cotton, palm products, and other cash crops.

In Zambia, fertilizer subsidies have been reduced as part of an extensive economic reform program, causing fertilizer use to fall. Cameroon is planning to turn its fertilizer import and distribution over to private firms. Fertilizer imports are currently handled by parastatals, and targeted toward cash crop production. Some of this fertilizer is diverted into food crop production.

1986 Outlook Favorable

Good weather conditions continued in east and southern Africa in early 1986, and preliminary estimates place 1986 harvests at last year's levels. In South Africa, corn production is estimated at 8.0 million tons, and corn exports are expected to increase to about 2 million tons in 1986/87. Zimbabwe's 1986 corn output fell 20 percent to 2.4 million tons, but this was desirable in view of last year's record harvest and huge carry-over stocks.

Corn production in Malawi and Zambia is estimated at the previous year's levels. The late rains in Kenya could reduce grain output in 1986. In Ethiopia the "belg" or secondary rains were timely and sufficient, and should result in a 200,000 ton or greater contribution to 1986 harvests. In West Africa, the rainy season got off to a good start but harvests will depend on weather conditions through August. Grasshoppers pose a major threat to east and west African crops this year.

The medium-term outlook for African food production will be conditioned by weather, world market trends, and the direction of policy adjustments.

Weather is the most important, since Africa's food sector is mainly rainfed. Weather will affect yields, planting decisions, and price expectations. The significant variability in weather in most regions is likely

to continue to produce sizable annual fluctuations in output. However, the institutional instabilities experienced in 1985 came from an unusual conjunction of events—record harvests following a catastrophic drought. The price uncertainties this caused, as marketing boards were swamped and cereal stocks swelled, should

lessen. Market stability is an important production incentive for farmers.

Declining world grain prices make African cereal production more costly relative to imports. This has implications for policy adjustments in cereal-importing countries. Countries unable to support relatively costly

RECOVERY AND REHABILITATION IN SUB-SAHARAN AFRICA

Sub-Saharan Africa's food emergency of 1983–85 called forth a massive international response. One component of this response, food relief, helped to save hundreds of thousands of lives. Over 5.4 million tons of food aid were provided to 20 countries in Sub-Saharan Africa in 1984/85. Another component, which has received less attention, is recovery and rehabilitation assistance.

Donor-supported drought recovery and rehabilitation programs are medium-range assistance programs. One major thrust of such programs is to strengthen the capacity to detect and respond to food emergencies. Another is to improve agricultural output and, to the extent possible in the medium term, reduce countries' vulnerability to food supply shocks.

With respect to improving crisis detection and response, much of the United States contribution in the wake of the 1983–85 famine came from the Famine Early Warning System (FEWS). This includes the National Oceanic and Atmospheric Administration's use of satellite imagery and weather data modeling to provide early reporting of potential drought and estimates of crop yields in the Sahel and Horn of Africa. In Sudan, a FEWS project involved the systematic analysis of area planted to sorghum and millet during 1985, using detailed satellite imagery and on-the-ground data collection.

FEWS activities also include collection and analysis of demographic, health, and economic data. The purpose is to detect behavioral changes, such as refugee movements or unusually high volumes of livestock sales, which may indicate the advent of a food crisis. The FEWS project has placed

people in six African countries to monitor food supply conditions.

In 1985, the U.S. Agency for International Development (AID) supported detailed estimates of 1985 food crop production in both Ethiopia and Sudan. The FAO also conducts crop assessments in countries with early indications of food shortages. Both USDA, in collaboration with AID, and FAO conduct ongoing economic analyses of food supplies and import requirements in developing countries.

Measures to support medium-term improvement and recovery in agricultural output include: water projects; seed development and input supply; livestock recovery projects; transportation support; and Food for Work projects in support of recovery and rehabilitation.

The United States and other donors have supported numerous projects to improve water supplies for irrigation and human consumption, building wells and providing water pumps. Although some projects provided emergency water supplies, others were undertaken to support agricultural recovery. AID supported water-related recovery projects during 1985/86 in Burkina, Chad, Mali, Niger, and Sudan.

Assuring adequate supplies of seeds in drought-affected countries has been a priority during the past 2 years. Rice seed was airlifted into Chad during 1985. In Ethiopia, donors swapped food aid for Government-owned seeds, distributing them to farmers in need. The United States supports seed development in Sudan, with particular emphasis on the development and introduction of a high yielding sorghum variety. The European Community and the World Food Program (WFP) also support seed reserve

domestic production will need to reassess policies that promote import substitution. Countries with appreciating currencies face an especially sharp drop in the dollar costs of grain imports. Devaluation by some countries may reduce some of this pressure by moderating the decline in, or even increasing, the dollar costs of their cereal imports.

programs in famine-affected countries. There were no significant seed shortages during the 1986 planting season.

Besides seed, African farmers often need other inputs, such as fertilizers and pesticides, and farm implements. AID has funded several input supply or "agricultural package" projects in Ethiopia. The FAO has led the call for pesticides to fight a potential locust crisis this year. Private voluntary organizations play a key role in input supply projects.

Recovery projects in the livestock sector, which was hit particularly hard by the 1983-85 drought, have been important. On a very limited scale, assistance organizations purchased livestock when the drought forced owners to sell. This was a means of preserving breeding stock and providing income support both at the time of purchase and during recovery. Other projects import new breeding stock. Ethiopia has received U.S. assistance for livestock recovery.

Rehabilitation of remote agricultural areas requires improvements in transportation to facilitate input supply and marketing. This has been particularly important in Sudan, where the EC is financing railway and airport repairs.

Food for Work projects have been instrumental by employing displaced people on agricultural rehabilitation projects. For instance, a World Vision Food for Work project assisted in the development of small-scale irrigation systems in Ethiopia.

Recovery and rehabilitation programs are assisting countries in reviving their agriculture in both the short and medium term. Further assistance is essential to continue growth and increase regional food security, efforts that must be part of longer term development strategies. [Stephen M. Haykin (202) 786-1680]

Cereal-exporting countries are under pressure to make price and marketing adjustments to cope with the financial burdens of large, overpriced stocks.

Low domestic food prices, and large stocks due to good harvests, have made it difficult for some African countries to effectively support official producer prices. The combination of low domestic food prices and falling world grain prices makes it unlikely that African countries will be able to economically support substantial medium-term increases in food production investment, particularly through continued official producer price hikes and provision of inputs.

Long-term improvement in Africa's food production performance is essential. It is dependent on broad advances in increased farm productivity, reduction of weather-induced variability, and improved institutional capacity. [Mary Burfisher (202) 786-1680]

FINANCIAL CRISIS AND POLICY REFORM

In May 1986, the General Assembly of the United Nations convened a special session, unprecedented in the UN's 40 year history because it was devoted to the economic problems of an entire continent: Africa. Two of the major themes of the session were particularly significant for the developing countries of Sub-Saharan Africa. First, these countries are confronted with a severe financial crisis; national expenditures and external debts have grown at a pace which cannot be sustained. Second, there is a clear need for continuing economic policy reforms. Often further external financial assistance is predicated on such reforms.

This article addresses both the sources and manifestations of Africa's financial crisis, highlights policy reforms affecting agricultural output and trade, and surveys African countries' recent experience with these reforms.

Limited Resources and Slack World Demand At Root of Crisis

The reasons for Africa's current crisis are numerous. They may be summarized as follows (1):

Africa's economic potential is circumscribed by nature, its state of development, and its position in world markets:

- o The region is susceptible to drought and has limited natural resources.
- o In most countries, physical infrastructure, including transportation and communications links, is limited.
- o Population growth is rapid, but poor health and malnutrition diminish the productive potential of the workforce.
- o Farmers use little fertilizer or other modern inputs.
- o Because of Africa's poverty, internal demand for domestically produced goods is weak.
- o African economies are typically small and dependent on international trade.

Changes in world market conditions have also contributed to the current crisis:

- o Part of the problem can be traced to the oil price shocks of the 1970's.
- o Declining prices for many export commodities relative to imports also have hurt Africa.
- o Initially, lower commodity prices were offset by increased credit through the recycling of oil revenues. Some countries borrowed heavily rather than reduce imports and domestic spending when their export revenues fell.
- o By the early 1980's, real interest rates rose considerably and supplies of new credit and financial assistance contracted.

Economic Policies Contribute to Decline

Economic policies in the developed countries have influenced commodity and credit markets:

- o Anti-inflationary, tight money policies and cuts in some countries' overseas development assistance budgets have reduced the availability of new financing for African countries.
- o Agricultural support programs in the United States and the European

Community have distorted world prices for certain commodities.

The economic policies and spending decisions of African countries are another source of the current predicament:

- o Government interventions often discourage domestic output and marketing through taxation, marketing restrictions, and pricing policies.
- o The operations of publicly owned enterprises are often inefficient and costly.
- o Many past investments have performed poorly, diverting scarce resources from more efficient uses.
- o Some countries have failed to diversify output and adjust patterns of consumption to shifting international prices, worsening their problems.
- o Overvalued currencies and external trade policies have inhibited exports while encouraging imports.

Manifestations of Crisis: Output and Investment Fall

In 39 Sub-Saharan countries with a combined population of over 400 million, the average per capita GDP declined 2.4 percent per year between 1980 and 1985, to \$410. The severity of the crisis varies among countries. Per capita incomes in low-income countries declined 2.7 percent annually between 1980 and 1985, reaching \$210 (2). Incomes deteriorated most rapidly in Niger, Togo, and Mozambique.

The region also includes 10 middle-income countries. Five are oil exporters. These countries achieved substantial economic growth during the 1970's. In Nigeria, with the region's largest economy and population, per capita GDP fell 3.1 percent per year after 1980. Gabon's per capita GDP also declined, while Cameroon and Congo sustained significant growth between 1980 and 1985.

In addition, there are five middle-income oil importers in the region, including Ivory Coast and Zimbabwe. Their per capita GDP's declined 2.5 percent, on average, between 1980 and 1985.

With total output in the region declining between 1980 and 1984, savings have been

sacrificed in favor of current consumption (3). As a result, domestic savings fell from 22 percent of GDP in 1980 to 14 percent in 1984. In the low-income countries, the 1984 savings rate was only 6 percent. As Africa's crisis deepened, gross domestic investment fell from 23 percent to 15 percent of GDP. Investment dropped most rapidly in the middle-income countries. As investment spending declines, remaining investments must become increasingly efficient, or GDP will continue to deteriorate.

Structure and growth of gross domestic product

Country	----GDP per capita----	Growth rate 1980-85 1/	Share of agriculture 1983
	1984 Dollars		
Benin	270	-0.4	40
Burkina	160	NA	41
Burundi	220	NA	58
Central Afr. Rep.	270	-1.7	37
Chad	NA	-4.2	NA
Ethiopia	110	-1.7	48
Gambia	260	-1.2	27
Ghana	350	-3.2	53
Guinea	300	-1.4	38
Guinea-Bissau	180	1.7	43
Kenya	300	-1.9	33
Lesotho	530	-3.5	23
Liberia	470	0.6	36
Madagascar	270	-3.1	41
Malawi	210	-1.1	NA
Mali	140	-2.1	46
Mauritania	450	0.3	34
Mozambique	NA	-8.7	NA
Niger	190	-7.8	33
Rwanda	270	NA	NA
Senegal	380	0.2	21
Sierra Leone	300	-0.4	32
Somalia	260	3.0	50
Sudan	340	-4.3	34
Tanzania	210	-2.2	52
Togo	250	-5.2	22
Uganda	230	NA	NA
Zaire	140	-1.7	36
Zambia	470	-4.2	14
Low Income	220	-2.7	40
Botswana	910	6.0	10
Ivory Coast	610	-6.0	27
Mauritius	1,100	2.6	14
Swaziland	800	-1.4	NA
Zimbabwe	740	-1.4	11
Middle Income			
Oil Importers	726	-2.5	17
Angola	NA	NA	NA
Cameroon	810	4.4	24
Congo	1,120	4.5	7
Gabon	3,480	-3.0	7
Nigeria	770	-3.1	26
Middle Income			
Oil Exporters	800	-2.2	25
Sub-Saharan Africa			
Total	420	-2.4	29

NA=not available. 1/ Trend growth rate of GDP in constant 1980 local currency; weighted averages using dollar equivalents.

SOURCES: World Bank, IMF and ERS calculations

Foreign Exchange Shortages Force Reduction in Imports

The region's earnings of foreign exchange through exports have fallen (4). Between 1980 and 1984, the volume of exports fell 7.4 percent per year. At the same time, the terms of trade, reflecting the prices of exports relative to imports, fell 0.8 percent annually (5).

Already, adjustments in imports have occurred. Merchandise import volumes fell 5.9 percent per year between 1980 and 1984. In the aggregate, imports of goods and nonfinancial services contracted more quickly than exports, thereby reducing trade deficits. The middle-income countries have experienced the sharpest contraction in trade.

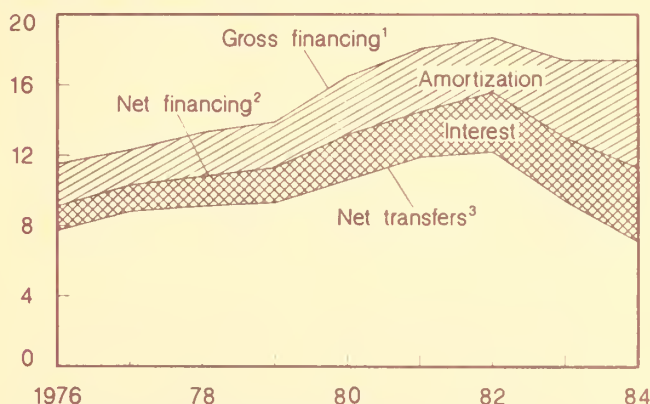
In the past, Africa relied heavily on financial inflows to compensate for its negative trade balance and savings-investment gap. Foreign grants, including food aid, and direct foreign investment contributed to total investment, consumption, and trade. But, debt financing was particularly important. In the 1980's, however, resource transfers have been declining. New external financing, less debt service, fell from \$11 billion in 1980 to \$7 billion in 1984 (6).

Rising Debts Choke Growth Potential

The growth of Africa's external debt is one of the most serious manifestations of the region's economic difficulties. Between 1970

Annual Financing: Grants, Loans and Debt Service, 1976-84

Billion, 1984 dollars



1/ Grants and loans, gross, including IMF credit.

2/ Grants and loans, including IMF credit less amortization

3/ Grants and loans, less debt service

Sources: OECD, Institute for International Economics, International Monetary Fund

and 1980, Africa's debts grew by 21 percent per year. Although growth in debt slowed to 9.4 percent per year during the early 1980's, by 1984 the total liabilities of the 39 Sub-Saharan countries reached \$80 billion (7). Under the right circumstances, debt financing of investment can be beneficial. If there are

sufficient increases in output, repayment of debts and interest and further domestic spending may be maintained. But, debt becomes a problem when it finances levels of spending which cannot be sustained. This is the situation that many African countries face.

Debt and debt service in 39 Sub-Saharan Africa countries, 1984

Country	Total liabilities \$ Million	Debt: GNP ratio Percent	Actual debt-service ratio
Benin	685	72.5	16.4
Burkina	437	48.3	12.7
Burundi	346	36.1	17.5
Cent. Afr. Rep.	262	44.0	3.8
Chad	115	38.3	13.1
Ethiopia	1,526	32.5	19.3
Gambia	280	169.8	13.6
Ghana	2,014	41.6	18.6
Guinea	1,287	65.3	27.2
Guinea-Bissau	180	111.0	27.9
Kenya	3,811	64.5	26.8
Lesotho	138	45.3	5.0
Liberia	1,027	92.6	16.7
Madagascar	1,952	80.2	40.5
Malawi	885	66.1	29.4
Mali	1,095	109.7	11.4
Mauritania	1,327	183.6	16.1
Mozambique	NA	NA	NA
Niger	947	83.3	18.3
Rwanda	281	17.6	3.3
Senegal	2,026	84.9	16.9
Sierra Leone	463	46.2	20.2
Somalia	1,429	104.8	25.7
Sudan	7,201	79.5	25.0
Tanzania	3,329	86.9	22.0
Togo	776	115.1	29.9
Uganda	1,031	20.5	35.1
Zaire	5,001	159.9	24.0
Zambia	4,775	181.0	24.6
Low income	44,626	81.4	22.1
Botswana	281	28.5	3.8
Mauritius	560	54.4	24.6
Swaziland	195	40.2	5.6
Zimbabwe	2,124	41.8	22.4
Ivory Coast	7,431	112.9	35.9
Middle-income oil importers	10,591	74.8	NA
Angola	NA	NA	NA
Cameroon	2,729	37.3	8.9
Congo	1,603	81.0	19.4
Gabon	975	28.8	11.4
Nigeria	19,744	26.1	25.5
Middle-income oil exporters	25,051	28.4	NA
Total	80,268	49.3	22.2

NA=not available.

SOURCES: OECD and World Bank

Many countries have already encountered serious difficulties in servicing their debts. For the region as a whole, actual debt service paid during 1984 equaled 22 percent of export earnings. Scheduled debt service for the same year was 28 percent of export earnings (8). There have been numerous rescheduling agreements in the 1980's and some countries are far in arrears. During 1984 and 1985, private or official multilateral rescheduling agreements were concluded for 17 countries in Sub-Saharan Africa. Within the same period, International Monetary Fund (IMF) drawing rights were temporarily suspended for Liberia, Sudan, and Zambia because of mounting arrears. Suspension of IMF credit is serious because it deters new lending.

Financial Assistance Linked to Policy Reforms

As debts rise, it is increasingly difficult for African countries to finance the investment required for future economic growth. A serious financing gap exists. A newly released World Bank report estimates that 29 low-income countries in the region will require \$11 billion per year in concessional financing between 1986 and 1990 to support GDP growth between 3 and 4 percent. This amount far exceeds expected commitments (9).

Composition of debt for 39 Sub-Saharan African countries in 1984

Indicator	All countries	Low income countries	Middle income oil importers	Middle income oil exporters	Nigeria
\$ Million					
Total liabilities	80,268	44,626	10,591	25,051	19,744
IMF obligations ^{1/}	5,251	4,240	1,011	0	0
External public debt ^{2/}	58,829	35,207	7,089	16,533	11,815
World Bank share ^{3/}	9,573	6,539	1,357	1,677	1,080
Growth rate, 1980-84 ^{4/}	9.4	7.0	6.3	15.8	30.8

^{1/} IMF purchases outstanding, excluding trust funds.

^{2/} External public and publicly guaranteed debt disbursed and outstanding. ^{3/} Outstanding loans of IBRD and IDA. ^{4/} Annual percentage growth in external public debt, as above.

SOURCES: World Bank and IMF

Indicators of financial resource flows for 39
Sub-Saharan African countries in 1984

Indicator	All countries	Low Income countries	Middle Income oil Importers	Middle Income oil exporters	Nigeria
	\$ Million				
(a) Total receipts 1/ (b + c)	9,647.8	7,121.8	1,092.4	1,433.6	788.0
(b) Private sector	-13.1	-461.8	22.1	426.6	318.2
(c) Total official	9,661.1	7,583.9	1,070.2	1,007.0	469.8
(d) Interest on pub. debt 2/	3,012.0	955.0	572.0	1,485.0	1,172.0
(e) IMF 3/	175.5	165.8	11.8	-2.1	0.0
(f) Adjusted financial flows 4/ (a - d + e)	6,811.3	6,332.6	532.2	-53.5	-384.0
(g) World Bank share 5/	1,421.8	857.8	287.8	276.2	227.3
(h) United States share 6/	678.0	765.0	94.0	-181.0	-198.0
Total ODA 7/	7,324.7	6,255.8	581.5	487.4	32.8

1/ Net of amortization of principal. 2/ Interest on external public and publicly guaranteed debt, disbursed and outstanding. 3/ Net change in use of fund credit, excluding trust funds. 4/ Estimated financial flows net of amortization of principal and interest payments. 5/ Net total receipts from IBRD, IDA, and IFC. 6/ Net total receipts from the United States. 7/ Total official development assistance, loans and grants, net.

SOURCES: OECD, IMF, and the World Bank.

Because of their economic difficulties and in order to attract new financing, African countries are undertaking sweeping policy reforms. Many reforms are supported by the IMF, World Bank, United States, and other donors. Key objectives of these reform programs include demand management, output and export promotion, and economic efficiency.

Among the many reforms being implemented, the following are particularly significant with respect to agricultural production, trade, and economic growth (10):

Devaluation. In many countries, balance-of-payments problems have been exacerbated by overvalued currencies (11). A typical prescription of adjustment programs is devaluation or, alternatively, exchange rate floating to permit depreciation. Devaluations and depreciations raise the domestic prices of traded goods relative to nontraded goods. This shift in relative prices tends to reduce import demand and increase export supplies. At the same time, price incentives increased for the production of export goods and of domestic substitutes for imported goods.

The effects of devaluation on aggregate output and consumption, and the distribution

Changes in exchange rates: annual percentage change
in \$ per unit of local currency, 1980-1985

Less than -25%	-25% to -15%	-15% to -10%	-10% to -5%	0
Sierra Leone Somalia Sudan Zaire	Botswana Lesotho Madagascar Zambia Zimbabwe	CFA countries 1/ Gambia Ghana Guinea-Bissau Kenya Malawi Mauritius Tanzania	Guinea Mauritania Mozambique Nigeria	Ethiopia Liberia

1/ Benin, Cameroon, Central African Republic, Chad, Congo, Gabon, Ivory Coast, Mali, Niger, Senegal, and Togo.

SOURCES: IMF and ERS calculations.

of costs and benefits are less determinate. They depend on conditions unique to each country. Although exchange rate changes promote balance-of-trade and internal adjustment, economists do not agree on the size and timing of these improvements (12).

Price Policy Reforms. Nonrenumerative prices frequently are cited as a reason for low agricultural output in Sub-Saharan Africa (13). Consumer and producer price controls and taxes are typical policies limiting the prices producers receive. In order to encourage agricultural production, some governments are increasing producer prices or reducing taxes. Other countries have ended price controls, allowing free market prices to prevail. Since African farmers have a limited capacity to adjust to changes in world prices for their commodities, countries often retain support prices guaranteeing minimum returns to producers.

Reducing Governments' Marketing and Trade Interventions. Many African governments have restricted or directly controlled domestic marketing and international trade. In some countries, state-owned companies were given monopolies over procurement and distribution of essential commodities. Sales of farm products to official marketing boards were often mandatory, and the movement or sales of inputs and agricultural products by private traders were restricted.

Regulation of trade through licensing of imports and exports has been a means for governments to affect domestic spending priorities and to control collection of taxes and tariffs. Some state-owned importing and exporting companies were protected through

preferential access to foreign exchange or as monopolies. Currency exchange controls were common where currencies were overvalued.

Although these policies are usually related to social equity and economic growth objectives, the operations of state-owned companies are often inefficient, and restrictions reduce the gains from internal and external trade.

Adjustment programs commonly involve curtailing the activities of state-owned companies, abolishing governments' monopolies in marketing, trade, and currency exchange, and lifting restrictions on private marketing and trade.

Government Budget Reforms.

Adjustment programs frequently include reforms in governments' budgets. Excessive budget deficits contribute to the gap between domestic savings and investment and to current account deficits. Actions to reduce government spending include cutting producer and consumer subsidies and limiting the role of state-owned companies. Other reforms involve increasing revenues and reallocating

expenditures. Efforts to reduce government market interventions, such as subsidies or state-controlled production and marketing, are usually taken in conjunction with policy reforms to increase market efficiency or producer incentives.

Adjustment programs also involve new mechanisms for financial and investment planning. The objective is to improve each government's ability to allocate its limited resources to the most productive uses. Financing recurrent costs of key infrastructural investments and rationalizing investments are given priority in government-sector reform packages.

Need for Credit Spurs Reforms in Low-Income Countries

The pressure for policy reform is most serious for Sub-Saharan Africa's low-income countries. In 1984, these countries accounted for 56 percent of Sub-Saharan Africa's total liabilities. The magnitude of the debt menace varies within the group. Outstanding public debt exceeded the gross national product (GNP) in eight of the countries: Gambia, Mali,

Policy reforms and debt reschedulings in selected countries, 1980-86

These countries:	Adopted these policy reforms in conjunction with IMF, World Bank or U.S. supported adjustment programs between 1980 and 1986:						Negotiated multilateral debt reschedulings 1984 and 1985	
	Devaluation	Price policy reforms affecting:		Agricultural sector marketing and trade reforms		Government deficit reduction	Paris Club (official)	Commercial (London Club)
		Food crops	Export crops	Institutional changes	Removing restrictions			
Ghana	X	o	X	o	X	X	o	o
Guinea	X	X	X	X	X	X	o 3/	o
Ivory Coast	o	X	X	X	o	X	X	X
Madagascar	X	X	X	X	X	X	X	X
Malawi	X	X	X	o	X	X	X	X
Mali	o 1/	X	X	X	X	X	o	o
Nigeria 2/	o	o	o	o	o	o	o	o
Senegal	o	X	X	X	X	X	X	X
Somalia	X	X	X	X	X	X	X	o
Sudan	X	X	X	o	X	X	X	X
Zaire	X	X	X	X	X	X	X	X
Zambia	X	X	X	X	X	X	X	X

X=True.

o=False.

1/ Mali adopted the CFA. 2/ Nigeria has adopted some of the standard policy reforms without donor-financed structural adjustment programs. 3/ Guinea is seeking a Paris Club rescheduling.

SOURCES: IMF and ERS.

Mauritania, Somalia, Togo, Zambia, Guinea-Bissau, and Zaire. In 10 others, debt exceeded 50 percent of GNP. Benin, Burundi, Ethiopia, Lesotho, and Senegal each experienced growth in outstanding public debts exceeding 15 percent per year between 1980 and 1984. Only Chad and Togo reduced their external public debt during this period.

The low-income group's ratio of scheduled debt-service payments to export earnings was 35 percent in 1984, higher than the debt-service ratio facing the middle-income countries. In Somalia, scheduled debt-service actually exceeded export earnings. The actual debt-service ratio was below 10 percent only in Chad, Lesotho, and Rwanda.

Because of their poor output and limited capacity to service debts, official concessional credit is particularly important for the low-income countries. But, official credit is becoming increasingly dependent on policy reforms.

Several low-income countries began donor-supported adjustment programs prior to 1984, and it is possible to draw preliminary conclusions from their experience. Ghana, Somalia, Mali, Malawi, Madagascar, and Zaire provide illustrations of ongoing adjustment programs. Senegal and Sudan are examples of countries experiencing difficulties in reform implementation, with periods of discontinuity in donor support. Guinea and Zambia are two countries with promising new reform initiatives.

New Policies Boost Ghana's Agriculture

In April 1983, Ghana launched an ambitious program of policy reforms, intended to reverse the steady deterioration in economic performance since 1970. Flexible exchange rates were instituted, leading to a depreciation in the cedi from 2.75 = \$1 at the beginning of 1983 to 90 = \$1 in January 1986.

Producer prices for export crops were increased in conjunction with exchange rate adjustments. The producer price of cocoa has increased from 12,000 to 85,000 cedis per ton over the past 3 years. In 1985, cotton and tobacco prices were increased 100 percent and 50 percent, respectively. Price controls and

guidelines were eliminated on all but eight essential items, including sugar, baby food, and imported rice. Additional reforms include Government monetary and fiscal policies and increases in public sector wages and salaries to offset some of the adverse income effects of price and exchange policies.

The Ghanaian economy is turning around. Good weather and policy reforms have contributed to economic growth. Real GDP growth was 7.6 percent in 1984 and 5 percent in 1985. Agriculture led the recovery in 1984 with 10-percent growth.

Recovery in the cocoa sector benefits the entire economy by increasing employment, incomes, export earnings, and Government revenues. Farmers have responded favorably to policy changes. Cocoa output has expanded in each of the last 3 years—the 1985/86 harvest is one-third larger than the 1983/84 crop. Higher real prices of cocoa are one reason. Declining prices of food crops relative to cocoa and improved management of trees also contributed to increased cocoa output.

Negotiations are underway for a World Bank Structural Adjustment Loan (SAL) and for an IMF Stand-by Arrangement or Extended Financing Facility (EFF) program. The 1986 Government budget will continue reforms begun in 1983. Budget deficits are expected to decline. Further GDP growth is expected in 1986, spurred by lower prices for imported oil. Longer term prospects depend on investment in future cocoa production. Current prices may not be high enough to induce expanded planting given uncertainty regarding future world prices.

Somalia in Uphill Battle Against Trade Deficits

In conjunction with two IMF Stand-by Arrangements between 1980 and 1983, Somalia began a series of exchange reforms and liberalized agricultural markets. The exclusive food grain and oilseed procurement authority of the Agricultural Development Corporation (ADC) was eliminated, restrictions on private movements of agricultural goods were removed, and official prices were raised. The ADC continues to function by guaranteeing minimum producer prices. Beginning with the United States' fiscal 1985 P.L. 480 Title I food aid program,

auctions of food aid commodities were instituted in an effort to bolster the role of the private sector in food marketing.

Agricultural output has responded favorably. Corn production has increased steadily during the 1980's and sorghum has increased in every year except 1983, a drought year. As a result, Somalia became self-sufficient in coarse grains during 1985/86.

Since 1981, the Somali shilling has undergone several devaluations. However, a 1983 ban by Saudi Arabia on livestock imports from Somalia set back improvement in the balance of trade. Banana output and exports have responded favorably to devaluations and reforms of price, input supply, and marketing policies. Further reforms, including a virtual elimination of restrictions on private currency exchange, boosted export performance in 1985. The 1986 program calls for continued devaluation, although a 50-percent surrender of foreign exchange earned through exports is required.

Despite these adjustments, Somalia faces an enduring liquidity crisis. Trade deficits have long been financed by remittances and foreign assistance. Declining oil prices are reducing worker remittances (14) and scheduled debt service exceeds export earnings. Somalia has failed to meet all of its external payments obligations, accumulating arrears in payments to the IMF and other official creditors.

Donor-Supported Policy Reforms in Malawi

In 1979, Malawi entered an IMF Stand-by Arrangement to support demand management policies. But, a harvest failure in 1979/80 requiring increased import expenditures for food led to a breakdown of this agreement. In 1980, the first of three SAL's was initiated, involving producer price increases, devaluation, increases in tariffs for the services of state-owned companies, and tax increases. A second SAL emphasized the removal of some price controls, reduction of fertilizer subsidies, and improved management of Government resources.

In 1980, Malawi increased official prices for corn, peanuts, cotton, and tobacco.

Initially, relative prices favored corn, contributing to large increases in production. After 1983, cotton and tobacco output responded to higher prices relative to other crops. Large harvests depressed market prices for corn, causing increased sales to the Government marketing board in 1985 and 1986.

The United States is providing Development Assistance and Economic Support Fund financing to support a package of reforms for Malawi. It includes eliminating fertilizer subsidies, increasing credit to the agricultural sector, incentive pricing for export crops, and privatizing farm input delivery systems. In addition, Malawi has just secured a third SAL from the World Bank.

Mali Pursues Structural Adjustment

With substantial donor support, Mali has pursued a series of structural reforms in the agricultural sector. Goals are to free markets, increase crop production, and reduce the financial reliance of the marketing boards on the central Government. Reforms to promote cotton exports and to stabilize cotton producers' incomes were introduced in late 1983. Restrictions on sales and movement of coarse grains have been removed and rice trade will be decontrolled over the next year. Floor producer prices have been increased and, in December 1985, consumer subsidies were reduced.

Initially, the size and operating losses of the cereals marketing board were reduced. However, with exceptional harvests in 1985/86, farmers took advantage of the board's support prices and, as official procurement rose, operating expenses increased.

Madagascar's Reforms Focus On Rice and Export Crops

Madagascar continues to suffer from extensive debts incurred between 1979 and 1981. In 1985, total outstanding debt equaled more than \$2 billion, 96 percent of GDP. Since 1981, the country has concluded four official multilateral rescheduling agreements through the Paris Club and a number of rescheduling agreements with commercial creditors. Nevertheless, scheduled debt service is nearly 50 percent of export earnings.

Madagascar began exchange rate and agricultural sector reforms in 1980. It liberalized rice marketing in 1983 by restricting state monopolies to two areas where they were operating integrated irrigation or input supply programs. Although official producer prices were increased, fixed pricing was replaced by producer floor and consumer ceiling prices. In 1985, retail price ceilings were eliminated and official producer prices were raised for rice, as well as coffee, cottonseed, and black pepper.

These policies should allow Madagascar to minimize rice imports and expand export crop production. However, vanilla and clove prices were not raised because demand prospects in world markets are unfavorable.

Zaire Restructures Public Enterprises

Zaire has been restructuring its public enterprises and removing restrictions on the private sector in order to reduce Government expenditures, raise productivity, and increase GDP. In 1978, Zaire reformed and eliminated many of its agricultural marketing enterprises. Prices for most agricultural commodities were decontrolled in 1982 and 1983.

In 1983, import licensing requirements were relaxed and a free market was opened for foreign exchange. In the mining sector, the largest company was reorganized and the mineral marketing company was abolished. Electricity tariffs were increased to finance repayment of obligations on past investments. In 1985, the state dropped its monopoly on petroleum imports and allowed petroleum prices to rise.

Zaire's economy has reacted favorably to these reforms. Between 1983 and 1985, annual GDP growth increased to 2.6 percent. And, while both exports and imports expanded, the current account deficit declined relative to GDP. However, both the growth of agriculture and the development of competitive markets in rural areas are inhibited by Zaire's weak transportation and communication infrastructure.

Senegal's Reform Process Encounters Obstacles

In 1979, Senegal embarked upon a set of policy reforms. Recurrent drought and

declining terms of trade during the 1970's made adjustment necessary. Policy reforms, supported by the IMF's Extended Financing Facility and a World Bank Structural Adjustment Loan beginning in 1980, emphasized raising agricultural output, reform of the Government sector, and new investment policies. Producer prices for agricultural commodities were raised.

In 1980 the EFF program was scaled back and replaced by a Standby Arrangement. Failure to reach agreement with the World Bank on fertilizer and seed distribution policies caused a breakdown in the SAL. Senegal's first experience with structural adjustment floundered because of overly ambitious objectives, drought in 1980, and declining terms of trade. Severe drought in 1983 caused further setbacks. Improved control over Government expenditures, a rise in world peanut oil prices, and a 1983 Stand-by Arrangement contributed to an economic upturn in 1984/85.

A 1985 SAL program addresses cereal and peanut production, industrial policy reforms, and public sector reforms. A P.L. 480 program also supports reforms in the rice marketing system. Cereal marketing restrictions have been removed, rice prices are being adjusted to world prices, and floor prices are being offered. In 1985/86, consumption of domestically produced grains increased while rice imports fell sharply.

Official marketings of peanuts for oil increased substantially in 1985/86. Peanut production is being encouraged through increases in producer prices and elimination of marketing taxes. The monopoly of the parastatal company over peanut seed and fertilizer distribution has been ended. The Government and the World Bank are financing fertilizer subsidies during a transitional period. The goal is to allow market forces to determine future use of fertilizer.

Sudan's Adjustment Efforts Hurt by Drought and Civil War

Sudan's efforts during the 1970's to centralize control of its economy floundered because of unsustainable growth in consumption, inefficient management of public enterprises, and low returns on investments. Sudan's record on policy reforms

since 1978 has been inconsistent. With IMF and World Bank support, an early set of policy reforms emphasized export promotion and demand restraint. Sudan's currency was devalued and price controls were relaxed, allowing producer prices to rise. Government expenditures were reduced. These reforms contributed to growth in irrigated agriculture and increases in cotton output.

Progress was constrained by a number of factors. Drought in 1983 and 1984 set back efforts to expand food and export production. Savings and external assistance were insufficient for financing essential investments and recurrent costs. Policy reform programs also encountered political obstacles. Civil war in the south, urban resistance to price increases, opposition to devaluation, and politically induced changes in taxation and banking policies disrupted reform programs. A military coup in 1985 was a result of Sudan's economic crisis and political divisions. Agreements with the IMF were suspended in 1981, 1982, and 1984.

Since 1985, there has been slow movement toward policy reform, despite the weak position of the transitional Government. Sudan's pound has been devalued further, and procurement prices for gum arabic and floor prices for peanuts and sesame have been increased. Government subsidies to producers and consumers are being reduced and tax policies are being reformed.

Agricultural output improved in much of Sudan during 1985/86, but the country is still in a severe economic crisis. Irrigated agriculture is dependent upon imported inputs. But the foreign exchange picture is particularly bleak. Low world prices for cotton and sorghum, and gum-arabic production shortfalls have reduced export earnings. Outstanding debt is high and net resource transfers are low.

Zambia Takes Drastic Measures

One of the most radical policy reform actions in Africa was taken by Zambia in October 1985, when weekly foreign currency auctions were established. This led to a 61-percent depreciation in 3 months. In 1983, Zambia had devalued the kwacha by 20 percent and instituted a managed float of exchange rates. Despite a 25-percent

depreciation in real terms by the end of 1984, the kwacha was still overvalued. Also, a complex system of import licensing was abolished during 1985. This will allow easier access by private businesses to essential imports such as parts and equipment.

Adjustment was necessary because of significant structural problems in the Zambian economy. The country has been overly dependent on exports of copper and copper markets have been depressed for several years. Zambia also depends on imported goods, particularly raw materials for industry. Foreign exchange scarcity has resulted in much of industry running at only 30 percent of capacity.

Rapid depreciation has caused severe inflation. It is too early to judge the impact on output and the trade balance. Initially, mining output was lower than expected because of continuing low prices and labor disputes related to falling real wages.

Zambia has raised official producer prices for agricultural commodities, particularly corn. However, increases in output have been constrained by increasing costs and input shortages. Marketing changes have accompanied the higher price regime. The procurement and input distribution role of the largest marketing board has been reduced. In 1981 some of its functions were shifted to provincial cooperatives. In 1985, the system was liberalized further, allowing private traders to operate, although corn marketing remained under Government control.

In 1986, pricing policies are being altered again. In place of official crop prices intended to cover production costs, the Government is instituting floor prices. In addition, restrictions on corn marketing have been lifted. It is unlikely that marketing reforms will be implemented effectively in time to affect supplies of agricultural goods this year.

Guinea Chooses Free Markets

After the death of President Sekou Toure in April 1984, Guinea acted rapidly to alter the deteriorating course of its economy. Free markets replaced strict Government controls. In May 1984, state farms were abolished, restrictions on internal movements of goods

were lifted, and compulsory sales by farmers to Government trading companies were ended.

In January 1986, Guinea instituted currency reforms, including devaluation. To signal this reform, the country issued a new franc to replace the syli. Sylis were redeemable in January for an equal number of francs. Whereas the exchange rate was approximately 24 sylis to the dollar during 1984, the initial value of the franc was 300 to the dollar in January 1986.

A number of changes have affected rice markets. In December 1985, the Government's cereal marketing monopoly was abolished, along with the ration card system which provided rice at 20 sylis per kilogram. In January 1986, the price for rice sold through official channels was set at 80 sylis per kilogram. Also, restrictions on private imports of rice were removed and rice was exempted from import tariffs. Food aid rice will now be sold through a joint venture company, while domestically produced rice and private imports may be sold on the free market. The Government will adjust official prices quarterly to avoid undercutting producers and private traders. Government wages have been increased to offset some of the income effects of higher rice prices.

Policy Reforms Undertaken In Middle-Income Countries

The pressures for policy reforms are not as great for the middle-income countries as for the low-income. Five middle-income oil exporters accounted for \$25 billion or 31 percent of Sub-Saharan Africa's liabilities in 1984. But, oil exports make these countries more solvent than the low-income countries—Cameroon and Gabon have used oil revenues to reduce outstanding debts in the 1980's. As a result, many forms of concessional financing are closed to the oil exporters and they rely on commercial credit markets. In the past, these countries borrowed heavily from commercial banks, because prospects for their investments were promising and world credit markets were burgeoning. But, with recent declines in oil prices, short-term liquidity is a problem, particularly for Nigeria.

Five middle-income oil importers held 13 percent of the region's 1984 liabilities.

Zimbabwe and Botswana experienced rapid growth in their debts during the early 1980's but do not presently have liquidity problems. Ivory Coast is the largest debtor in this group. Its debts exceed annual GDP and debt service is high relative to export earnings. As a major exporter of cocoa, coffee, and timber, the country remains credit-worthy. But, following a decline in export revenues, it too has engaged in donor-supported policy reforms.

Nigeria Forced To Adjust as Oil Export Earnings Drop

Nigeria's current crisis stems from its dependence on oil revenues. Because of falling oil prices, Nigeria is being forced to adjust its expenditures. With \$20 billion in liabilities, equal to nearly a third of its GDP, it is Sub-Saharan Africa's largest debtor. Its debts have grown rapidly in recent years and debt service consumes more than 25 percent of export earnings. The response of the Government to reduced liquidity has been to restrain aggregate demand and increase agricultural output.

Demand restraint involves reductions in Government expenditures and trade and exchange restrictions. In 1982 and 1983, tariffs on imports were increased and imports of many products were restricted or banned. New restrictions on imports and controls on foreign exchange were introduced in early 1984. In 1985, these controls were simplified, but imports of commodities such as rice, corn, and vegetable oil are prohibited at present. The real value of the naira has appreciated and Nigeria has been under pressure to devalue. However, it has opted for import restrictions rather than devaluation for domestic political reasons, placing itself at odds with the IMF.

Controls affecting food imports contribute to incentives for domestic production of staple foods by raising prices. Agriculture also receives priority in Government spending. Grain production increased to 8 million tons in 1983 and 11 million in 1985. Total agricultural imports fell from \$2.5 billion in 1981 to \$1.5 billion in 1985.

Ivory Coast Pursues Spending Reforms

Ivory Coast initiated a large public investment program during the late 1970's,

mainly for the development of petroleum production which was to be used to pay off debts. Initially, this was financed by coffee and cocoa export revenues. As the prices for these commodities declined and Ivory Coast's trade balance turned negative, investments came to depend on external financing and expansion of the money supply. Policy reforms since 1980 have involved reducing public expenditure, increasing agricultural output and exports, and reducing the bias against agriculture in trade policies. Two EFF and two SAL programs have supported these reforms.

Since 1981, Ivory Coast has reduced Government spending. Although public investment has been cut, the share going to agriculture has increased. Public enterprises have been restructured to improve management, resulting in a drop in transfers from the Government.

Between 1981 and 1984, producer prices for export crops were increased. Although producer prices for cotton were raised, fertilizer subsidies for cotton production were dropped. Consumer subsidies for rice and other staple foods were also reduced. Output of these commodities was slow to respond, partially as a result of drought in 1983/84. However, in 1985, output of food and export crops expanded.

Recent improvements in the trade balance resulted from falling imports, reflecting Ivory Coast's weak foreign exchange position and slow economic growth. In 1985/86, increases in earnings from coffee and cocoa fueled greater improvement in the trade balance.

Ivory Coast has successfully negotiated a third SAL program. This will involve an export-oriented growth strategy favoring diversification and liberalization of agricultural marketing with a reduced role for public enterprises.

Too Early To Judge Impact of Policy Reforms

It is premature to pass judgment on the effectiveness of policy reform programs in promoting balanced growth. Only a limited number of African countries have more than a few years' experience with donor-supported

Growth in production and trade, 1980-85

	Real GDP per capita	Ag. prod. per capita	Exports	Imports
	Percent per annum			
Ghana	-3.2	-3.1	-10.7	-8.8
Guinea	-1.4	0.0	1.2	-0.4
Ivory Coast	-6.0	-1.2	-0.1	-12.8
Madagascar	-3.1	-1.1	-6.4	-14.2
Malawi	-1.1	0.3	-2.0	-10.7
Mali	-2.1	-1.8	-0.7	-2.9
Nigeria	-3.1	-1.8	-14.0	-16.0
Senegal	0.2	-1.9	1.8	-5.4
Somalia	3.0	-2.8	-12.1	0.5
Sudan	-4.3	-0.2	-7.2	-7.3
Zaire	-1.7	-0.6	-1.3	-5.3
Zambia	-4.2	1.6	-8.9	-9.2

NA=not available. 1/ Local currencies.

SOURCES: ERS and World Bank

adjustment programs. Furthermore, the effects of policy reforms cannot be evaluated in isolation from other economic influences (15); the policy reforms of the 1980's have coincided with extremes in weather conditions, declining relative prices for many primary commodities, instability in world markets, and changing policies in the industrialized countries. However, it is possible to identify some of the factors which are likely to make a difference in the success or failure of these reforms.

Growth in aggregate output depends on a number of factors: Overcoming long-term constraints to growth requires carefully managed and increased use of modern inputs. In addition, investments in infrastructure, research, and education are necessary to promote long-term growth (15). The investment required for growth in productive capacity depends on the mobilization and efficient use of domestic savings and external financing. By increasing the efficiency of resource allocation, policy reforms should support economic growth. However, there is a potential conflict between policy actions to restrain import demand, such as devaluation, and aggregate growth. With the heavy burden of debt in most African countries, growth is contingent on debt relief and concessional financing.

There is a critical link between gross domestic production and the growth of agricultural output. Agriculture accounts for approximately one-third of all GDP in

Sub-Saharan Africa. The supply of inputs and financing, as well as the demand for agricultural products, depends on general economic activity. Weather is another major determinant of farm output, since most crop production occurs under rainfed conditions. Good weather contributed to the success of policy reforms in increasing crop production in Ghana and Somalia. In Mali, Senegal, and Sudan, droughts caused setbacks in structural adjustment programs designed to expand agricultural output.

Policies that increase market efficiency, reduce trade barriers, and raise returns to producers boost farm output. However, if official producer prices are set too high, a misallocation of resources may result through excess production and costly official procurement of certain crops. High support prices and favorable weather led to surges in farmers' sales of coarse grains to official marketing boards during 1985/86 in Malawi, Mali, and Somalia. Similarly, decontrol of prices may discourage output of agricultural commodities when prices of farm goods at the countries' border fall below domestic prices. For instance, Guinea's efforts to encourage rice output through decontrol of production, marketing, and trade may not succeed in the short run because international rice prices are falling. Agricultural production and price movements are discussed earlier in "Food Production Recovers from Drought."

Devaluations, as in Ghana, reinforce the production incentives for tradable commodities provided by price policy reforms. However, if (as in Sudan's irrigation schemes) imported inputs significantly affect output, and input use declines with higher import prices, exchange reforms may reduce export supplies.

Agricultural export earnings are determined primarily by external factors. Although devaluations may increase a country's export supplies, exports depend on world market conditions. For many tropical products, world demand expands slowly as prices fall or incomes rise (16). As a result, policy actions taken simultaneously in several countries to increase output and exports of tropical agricultural commodities threaten to negate many of the benefits accruing to the individual countries. In addition, the agricultural and trade policies of developed

countries will continue to affect Africa's export prospects. The outlook for agricultural exports is discussed in "Export Commodities: Important Foreign Exchange Earners," later in this issue.

The effects of policy reforms on imports depend on several factors. The ability to switch demand to domestically produced goods is important. Where demand for imports is inelastic, as for essential foods or inputs, demand restraint policies may not work. Furthermore, where the expenditure shares of inputs are high or demand is inelastic, imports cannot be reduced without causing a reduction in economic activity. Zambia and Sudan are two countries critically dependent on imports. Sustainable import growth in the long term depends on the growth of GDP, increases in export earnings and the ability to attract external financing. Unless export earnings, and net external financing increase, much of the necessary short-run balance-of-payments adjustment will come through falling imports. The situation and outlook for agricultural imports is discussed in "Import Dependency Remains High," following. [Stephen M. Haykin (202) 786-1680]

FOOTNOTES

1. World Bank, *Towards Sustained Development in Sub-Saharan Africa*, 1984, and Organization for Economic Cooperation and Development, *Twenty-five Years of Development Cooperation: A Review*, 1985.

2. Figures for 1985 are preliminary. Growth rates are trends based on real GDP in local currencies. Averages are weighted based on 1984 GDP converted to U.S. dollars at official exchange rates.

3. National accounts data may underrepresent savings and investment behavior in the nonmonetized sectors of developing countries. For instance, storage of seed is a saving/investment activity not fully captured in economists' data.

4. In this report, see article on exports, "Export Trends Threaten Foreign Exchange Earnings."

5. World Bank, *Financing Adjustment with Growth in Sub-Saharan Africa, 1986-90*, 1986.

6. Organization for Economic Cooperation and Development, *Geographical Distribution of Financial Flows to Developing Countries*, 1986, and Carol Lancaster and John Williamson, *African Debt and Financing*, Institute for International Economics, 1986.

7. World Bank, *Financing Adjustment....*

8. World Bank, *Financing Adjustment....*

9. World Bank, *Financing Adjustment....* See also, Organization for African Unity, "Africa's Priority Program for Economic Recovery, 1986-90," and Carol Lancaster and John Williamson, *African Debt and Financing*, Institute for International Economics, 1986.

10. Since this article focuses on real sector phenomena, monetary objectives and policies are omitted from the discussion. This is not to deny the importance of the links between the monetary and real sectors. For example, domestic credit and inflation policies relate closely to domestic output and trade.

11. World Bank, *Financing Adjustment....*

12. Much of the criticism of donor-supported adjustment programs focuses on social welfare implications. These issues are beyond the scope of this article. For an excellent treatment of the effects of policy reforms on nutrition, see Per Pinstrup-Anderson, et al., *Macroeconomic Adjustment Policies and Human Nutrition: A Review and a Proposal for Research*, International Food Policy Research Institute, March 1986. On the effects of devaluation, see William R. Cline, "Economic Stabilization in Developing

Countries: Some Stylized Facts," in John Williamson, ed., *IMF Conditionality*, 1983; Bela Mukhoti, "The International Monetary Fund and Low-Income Countries," USDA, Economic Research Service, *Foreign Agricultural Economic Report*, (forthcoming); and, Mohsin S. Khan and Malcolm D. Knight, "Fund-Supported Adjustment Programs and Economic Growth," *IMF Occasional Paper*, no. 41, 1985.

13. Marion Bond, "Agricultural Responses to Prices in Sub-Saharan African Countries," *IMF Staff Papers*, December, 1983; Kevin M. Cleaver, "The Impact of Price and Exchange Rate Policies on Agriculture in Sub-Saharan Africa," *World Bank Staff Working Paper*, no. 728, 1985; and Food and Agriculture Organization, "Agricultural Price Policies," document c 85/19, August 1985.

14. See David W. Skully, "Lower Oil Prices Have Mixed Meaning For Region's Agricultural Imports," USDA, Economic Research Service, *Middle East and North Africa Situation and Outlook Report*, 1986.

15. Fahrettin Yagci, et al., "Structural Adjustment Lending: An Evaluation of Program Design," *World Bank Staff Working Paper*, no. 735, 1985.

16. An alternative agricultural development strategy places emphasis on structural changes rather than price incentives. See Christopher L. Delgado and John W. Mellor, "A Structural View of Policy Issues in African Agricultural Development," *American Journal of Agricultural Economics*, December 1984.

SOUTH AFRICA'S AGRICULTURE RECOVERS BUT ECONOMY FLOUNDERS

Agriculture in South Africa began to recover from drought in 1985, but the sector remains mired in a financial squeeze. Overall agricultural production increased 8 percent, but not enough to bring output back to 1980 and 1981 levels. While the mining sector also had increased output, other sectors did not. Real GDP declined about 1 percent to only 1.1 percent above that of 1981. Real consumption declined as domestic demand weakened. The number of registered unemployed increased 73 percent in the year ending November 1985.

Debt problems, lagging investment, and capital outflows are some indications of the financial crisis confronting South Africa. The economy's stagnation and recent political events portend continued uncertainties and adjustments. While traditionally a net importer of long term capital, South Africa is now experiencing net outflows of capital. As racial violence increased in June, the value of the South African Rand dropped sharply to \$.37, matching the previous low of late 1985. The Rand has suffered one of the more severe drops in Africa relative to the dollar in 1980 it was worth \$1.29.

Early in 1986, the outlook for real economic growth was positive, but that deteriorated by midyear, as unrest and rioting increased. The current unstable situation has a double negative impact on the economy. Increased government funds, priorities, and attention are focused on maintaining security. Confidence has suffered and leading policymakers have noted that new investment is very slow despite incentives such as reduced interest rates. In mid-June, additional measures, including increased budgetary expenditures, were instituted to stimulate the economy.

Debt Problems Intensify

South Africa became the world's ninth largest debtor in 1985 with total debt reaching \$23.7 billion. Foreign debts escalated sharply beginning in 1983 as efforts were made to stimulate economic growth, which declined 2.5

percent that year. South Africa's economy, with a GNP of \$74 billion in 1984, is approximately the same size as Nigeria's, but South Africa's debts are higher.

A debt crisis was precipitated in 1985 when foreign banks began refusing to roll over short term debts, due to the increasing racial violence in the country. Effective September 1985, South Africa declared a partial moratorium on repayment of its foreign debt. In April, an interim arrangement was made with major creditor banks for debt repayment, and this will be reviewed in 1987. South Africa's debt service payments were \$3.5 billion in 1985, and are estimated at \$3.8 billion for 1986. Debt service payments, not including interest, were up to one-fifth of merchandise export value in 1984 and 1985, and are estimated slightly higher for 1986, as the debt is reduced.

South Africa Should Regain Net Grain Export Position

Agricultural production during 1986 will change little from 1985. Output of corn, wheat, oilseeds, fruit, and poultry is expected to increase slightly, while that of sorghum, sugar, red meat, and milk are forecast lower. Rainfall in early 1986 was slightly less than the year before and the timing was again poor, but temperatures were beneficially cooler. Corn yields will be down slightly from 1985's 2 tons per hectare. Sorghum and oilseed yields also will be lower, offsetting slight increases in area planted.

The severe droughts of 1983 and 1984 sent an unprecedented shock through South Africa's grain sector, and lesser shocks to oilseeds and livestock production. During the local marketing years 1983/84 through 1985/86, the country became a net importer of grain for the first time since the late 1940's. Pressures to export to earn precious foreign exchange are great. While yellow corn exports have resumed, South Africa is still not able to export white corn, the staple of much of the black population. In early 1986, 200,000 tons were imported from Zimbabwe, and more may be imported if foreign exchange is allocated. About 300,000 tons of wheat are being

imported, but foreign exchange was not readily available for this, an indication of its increased scarcity.

Farmers Face Cost/Price Squeeze

Despite the recovery, South African farmers face a severe cost/price squeeze related to input price inflation, relatively high debts, and weak demand for farm products. Gross income was up 13.6 percent to \$4.5 billion in 1985, but a 19-percent rise in farm input costs cut net farm income to \$920 million. Producer prices were up 8.6 percent, but only wool and horticultural prices made good gains. Prices of field crops rose only 0.8 percent. Fertilizer prices rose 33 percent from 1984 and use dropped in 1985. A small fertilizer subsidy was terminated in 1983. Farmer fuel expenditures were up 25 percent.

Farm debt has continued to rise steadily, to 25 percent of capital assets in 1985, up from 13 percent in 1980. Interest payments have become a major producer cost, which partially explains why producer expenditures on new capital goods were up only 1 percent in 1985. The Government recently announced some farmer debt assistance, including interest subsidies, production loans, and the lengthening of debt repayments for up to 10 years.

Support for Agriculture May Weaken

Renewing growth and increasing employment are the overwhelming economic issues in South Africa. Given greatly increased demands on the budget and some increase in multiracial participation in budget decisions in recent years, the Government is likely to lessen the priority given to agriculture. For example, political pressures toward reducing subsidies to commercial farmers and maintaining consumer subsidies for corn meal and bread have increased. The Government has made it clear that it is less able and willing to incur losses in exporting corn than earlier years. Although the recent decline in the Rand's value means that large subsidies will not be required for current exports, there is still uncertainty about corn pricing policies.

Reduced input use may become a trend, given increased risk aversion by farmers holding heavy debts. With fertilizer use down, a year with good rainfall is less likely to bring another record 3.3-ton-per-hectare corn yield as in 1981. Investment may continue to be weak and future growth could slow, with a less capitalized, but possibly more labor intensive, agriculture.

Trade Critical to Economy But Minerals Dwarf Agriculture

The South African economy depends highly on foreign trade. In 1985, its exports equalled 34 percent of GDP. Agricultural exports increased by 19 percent in 1985 to just over \$1 billion, about 40 percent of agricultural GDP. Total exports were up 45 percent to \$16.9 billion, primarily because of the mineral sector, and a large trade surplus was realized. Agriculture's share of total exports declined to 6 percent, compared with 11 percent in 1982, prior to the severe drought.

Mining was a bright spot in South Africa's economy in 1985 and the outlook remains favorable in 1986. Gold prices are up about 8 percent over 1985, coal mining remains competitive, and the demand for diamonds is good. While total private investment dropped by about 6 percent in 1985, investment in mining was up 11 percent. The reduction in the value of the Rand versus the dollar has helped keep mining profitable.

If racial violence continues, pressure for trade sanctions against South Africa are expected to increase. The extent and potential impact on export earnings are difficult to assess. Sanctions would probably be applied selectively by different countries and on different commodities, with strategic mineral exports likely to be excluded. For agricultural exports, fruits and wines appear more vulnerable to cuts by importers than corn, for example. In any event, the impact of any sanctions could extend to neighboring countries in Southern Africa. Most of their economies depend on South Africa for transportation, trade, and employment. [Larry Witucki (202) 786-1680]

FOOD CONSUMPTION INCREASING BUT PROBLEMS PERSIST

Food supplies increased significantly in Sub-Saharan Africa by late 1985, following record grain harvests and imports. The unprecedented food emergency that had enveloped much of the region early in 1985 has subsided, but serious problems continue in many areas. While the region's overall supplies are currently abundant, distribution is far from even among and within countries. The increase in the aggregate availability of food has not been sufficient by itself to alleviate chronic consumption and nutrition weaknesses.

The total consumption of grains in the region, excluding South Africa, increased by 3 million tons or nearly 7 percent during 1985. 1/ Per capita, this represented a 4-percent rise. Further increases should be realized in 1986 because much of the food produced or imported in 1985 will be consumed this year. In South Africa, total consumption, net of feed, rose 10 percent, and 7 percent in per capita terms. Consumption data used here were based on availability, consisting of production plus net trade and the change in stocks. 2/

Sub-Saharan Africa's food crisis reached its height in the latter part of 1984 and early in 1985. Even though record imports poured into the region, average per capita consumption of grain dropped to 117 kilograms for 1984, the lowest since a similarly widespread drought in 1973. Imports have accounted for an increasingly large part of

1/ Sub-Saharan Africa data exclude South Africa, which is discussed separately in this section.

2/ Crop calendars for individual countries and subregions vary in Sub-Saharan Africa, reflecting different climatic regimes. Millet and sorghum are predominantly produced and consumed in countries north of the equator where harvests are not complete until November or December, and the use of calendar year data is not entirely representative. Therefore millet and sorghum consumption in the current year includes the previous year's production added to current stock and import data. Data for the other grains are all for the current year.

consumption over the last two decades, but these have not been sufficient to result in increased consumption. Per capita consumption has stagnated in this period, while the import share has more than doubled since the mid-1960's from less than 10 percent to 23 percent.

The overall improvement in 1985 food supplies and consumption is a result of both higher imports and higher output. Stocks had been drawn to low levels, particularly in the worst affected countries that typically have low stocks in the best of times. Despite the dramatic rebound in 1985 production, the share of imports in consumption remained at 23 percent. The increase in 1985 imports largely reflects critical needs before local crops were harvested. In some cases, import or aid decisions were made before domestic production was known, and some of this grain remains in warehouses in the ports. Another uncertainty involves the status of herders, which can be difficult to judge. Herders may not immediately benefit from better crops.

Food Aid Was Critical

The 1985 imports included a record influx of food aid, estimated at close to 50 percent of total imports, that made a vital contribution to stabilizing the crisis in most countries. Although many shipments arrived

Grain supply and utilization, Sub-Saharan Africa 1/

Year	Prod.	Ending stocks	Im- ports	Ex- ports	-----Consumption-----		
					Total	Per cap.	Imports' share
						-Kg.-	Percent
	-----1000 tons-----						
WHEAT							
1966-68	1,032	43	1,573	22	2,574	9.9	61.1
1976-78	1,103	54	1,508	27	2,573	12.6	72.5
1980	1,364	444	4,411	0	5,798	15.7	76.1
1981	1,502	563	4,857	0	6,240	16.4	77.8
1982	1,697	474	4,783	0	6,569	16.7	72.8
1983	1,354	544	4,662	0	5,946	14.7	78.4
1984	1,184	346	5,418	0	6,800	16.4	79.7
1985	1,370	497	6,038	0	7,257	17.0	83.2
RICE							
1966-68	2,748	17	567	1	3,298	12.7	17.2
1976-78	3,712	271	1,583	1	5,135	15.0	30.0
1980	3,939	291	2,536	11	6,541	17.7	38.8
1981	4,093	294	2,634	8	6,716	17.6	39.2
1982	4,222	332	3,357	2	7,539	19.2	44.6
1983	4,137	382	3,103	0	7,190	17.8	43.2
1984	4,287	141	3,191	0	7,719	18.6	41.3
1985	4,617	70	2,666	0	7,324	17.1	36.4
COARSE GRAINS							
1966-68	26,412	354	171	807	25,672	98.8	0.7
1976-78	33,319	1,750	946	604	32,757	96.5	2.9
1980	33,523	1,357	2,308	415	34,894	94.3	6.6
1981	37,542	2,475	2,298	501	36,816	96.6	6.2
1982	35,487	2,959	1,644	792	37,440	95.3	4.4
1983	31,264	1,435	1,406	939	36,283	89.8	3.9
1984	31,606	1,170	2,447	295	34,228	82.4	7.1
1985	43,382	2,081	3,138	427	37,361	87.4	8.4

1/ Excludes South Africa.

late or were slowed by port congestion, large amounts arrived in the critical period before harvests when local food supplies were exhausted. The largest recipients of aid were Sudan and Ethiopia, accounting for 44 percent of aid to the region. For many countries, the scale of aid received was sufficient to result in a large carryover when production rebounded.

The effectiveness of food aid in reaching the needy has varied. Severe problems were encountered in most of the major recipient countries. Shortages of vehicles, spare parts, fuel, and other nonfood essentials for relief were widespread. Fighting prevented the distribution of food to many places or necessitated extraordinary measures at high costs. For example, emergency airlifts of food were mounted in Ethiopia, Sudan, and Angola. Armed convoys were used at times to truck food in Ethiopia and Mozambique. Barges were used to reach some coastal areas of Mozambique because of insecurity and lack of roads.

The role of donor countries and international organizations was quite large, providing financial assistance and logistical support, in addition to food. Private voluntary organizations also played an important role in the physical distribution of food aid, since local governments' resources were stretched too thin. Some of these groups already operated feeding programs targeted for vulnerable parts of the population. Beyond the focus on increasing immediate supplies of food, these organizations and donors often linked relief to rehabilitation activities and the supply of inputs for the next crop. Despite the great media attention to special emergency feeding camps, much of the aid was distributed through existing commercial channels. Governments generally prefer "monetized" distribution to avoid creating dependence on free food.

Food aid shipments can be broadly categorized as emergency or structural. The structural aid is geared toward chronic deficits and balance-of-payments support. In the last 2 to 3 years, much of the increase in aid to the region has been emergency aid, only required on a temporary basis. U.S. emergency food aid in fiscal 1984 set a record at over 500,000 tons, and then more than tripled in fiscal 1985 to 1.8 million tons. When added to regularly programmed shipments,

U.S. food aid for fiscal 1985 surpassed 3 million tons. Large aid shipments to certain countries continue in 1986, but many programs have been ended or reduced.

Emergencies Continue in Some Countries

Major food crises still exist in Angola, Botswana, Cape Verde, Ethiopia, Mozambique, and Sudan, despite food surpluses elsewhere in the region. For the most part, these problems do not come from current poor weather, but from slow recovery after the previous drought or from nonweather factors.

Although food production in Ethiopia increased in 1985, recovery was below potential. Food supplies remained fragile in parts of the country, such as Eritrea, Tigre, and Hararghe, where production problems are chronic and relief supplies did not fully reach. Continued fighting is a major obstacle, while marketing and pricing policies also restrict food availability.

The Ethiopian resettlement program, in which more than 600,000 people from the north were moved to more fertile southern areas, is intended to reduce pressure on overworked land. Many donors have opposed the program because of the diversion of resources from other activities and alleged human rights violations. The villagization program, moving people from scattered farmsteads into central villages, is also controversial and has disrupted farming and similarly complicated the situation. Both programs have been suspended temporarily.

Ironically, Sudan has a large surplus of domestically produced sorghum, but it cannot supply deficit areas within the country itself due to logistical problems and the lack of resources. Some 4 million people will depend on food aid this year. These are small farmers in the north and west in areas where rains were not good, or who lacked seeds, whereas the surge in output came from large-scale farmers in the east. Insurgency in the south of the country is problem. By mid-1986, donors had purchased 200,000 tons of Sudanese sorghum for redistribution, but outside supplies will still be important. Food supplies could be inadequate in parts of the country during the latter half of 1986.

The current food crises in Mozambique and Angola revolve around insurgency. Apart

from obviously affecting production and drought recovery, fighting severely restricts the ability to distribute relief food and escalates the costs. The insurgency in Mozambique has recently spread to some of the country's prime agricultural land in Zambezia province, increasing the number of people facing serious food shortages.

There is little known about available food in some parts of Mozambique and Angola that are effectively isolated and receive no outside supplies. The displacement of people is a severe problem in both countries. The rural exodus has added to the food needs of urban areas, already highly dependent on imports. Rural markets in both countries, which operate mainly on barter, are small because of the shortages of consumer goods available for farmers. When these problems are combined with extreme transportation difficulties, the scope for increasing domestic grain marketing is slim.

Although identified as a country still facing a food emergency, Botswana has avoided extreme hunger problems and famine deaths despite prolonged drought and recurrent crop failures. A combination of factors accounts for this. The Government has given priority to early warning and relief programs. Given the the country's financial strength, donor assistance, and the relatively small and physically concentrated population, these programs have worked well. Prolonged drought has also caused repeated crop failures in Cape Verde, but longstanding relief efforts have prevented famine in this small island nation.

Uneven Distribution and Eroding Purchasing Power are Major Concerns

An aggregate view of consumption disguises much hunger. Although food supplies appear adequate in many countries, localized deficits are still common. A number of Sahelian countries confront problems similar to Sudan, but on a smaller scale. Local surpluses that developed after bumper 1985 crops are not getting to all deficit parts of these countries. Logistical problems and the lack of funds are prime reasons.

Refugees and displaced persons in many countries are also linked to food problems. These groups may be totally dependent upon relief, whether from local or donor supplies.

In some cases, particularly Chad, Ethiopia, Sudan, Somalia, and Uganda, frequent cross-border movements and political problems obscure monitoring and access to food. Since the movement of these people is not just drought-induced, they have not all returned to their home areas when the weather improved. Furthermore, there may be no incentive to return if farmers do not have the means to resume cropping.

Poverty is critical in restricting consumption throughout Sub-Saharan Africa. It is not just an urban phenomenon, but it is more obvious there than in rural areas. As the region's financial crisis has deepened, incomes have declined further. This problem was exacerbated when food prices shot up because of drought-induced shortages. Although consumption surveys are scarce in the region, scattered information indicates uneven food distribution by income and even within families. Even if incomes begin to recover, however, segments of the population will still have difficulties.

Retail Price Trends Vary

Decreasing food prices because of higher production could ameliorate some of the effect of lower average incomes. In 1986, two contrasting food price patterns have emerged. In those countries where supply and demand forces dominate food markets, prices have fallen significantly. This is the case in many Sahelian and West African countries following the bumper crops of 1985. But the second broad trend contrasts vividly with the first: food prices have risen dramatically because of policy reforms in many countries. These are mainly in East and Southern Africa in countries where prices have been effectively administered. The reduction or elimination of subsidies, along with market liberalization, is central to recent policy reforms. As food prices have begun to reflect true costs, they have increased. Devaluation and changes in the exchange rate regime have raised the cost of imported foods as well, and have also contributed to higher domestic prices because of imported inputs.

Over the longer run, the reform process should stimulate domestic production and contribute to keeping retail prices within bounds. There is already evidence that farmers are responding well to greater incentives, and increased investment in

agriculture will eventually reinforce this response. However, the immediate impact is often negative for the urban population, which faces sharply higher prices in the midst of an already severe economic setting. The symbolic calls for "belt-tightening" are becoming increasingly literal. Inflation rates have risen sharply in many countries, with food prices a major factor, while austerity measures and cuts in state spending have tended to increase unemployment in the early stages of adjustment.

In Madagascar, for example, the rice market has been liberalized and subsidies cut recently, while imports have been restricted. Retail prices have risen by 80 percent since the beginning of 1984. Even though producer prices were raised significantly for the 1985/86 crop season, poor weather meant there was little change in domestic output. For 1986, price ceilings have been eliminated and retail prices are likely to rise 20 percent. Nevertheless, the setting for local production has improved tremendously, and favorable weather should mean bountiful supplies and an easing of prices.

In Zaire, the effects of the reforms on food prices have been mixed. In 1983, nearly all agricultural prices were decontrolled, and there was a massive devaluation of the currency, among other measures. There was an immediate surge in inflation to 100 percent in Kinshasha, largely due to food price changes. Part of the rise stemmed from higher fuel costs that marketing agents were able to pass on to consumers. Food price increases moderated to 11 percent in early 1984, as local supplies increased, but they reached 40 percent for 1985.

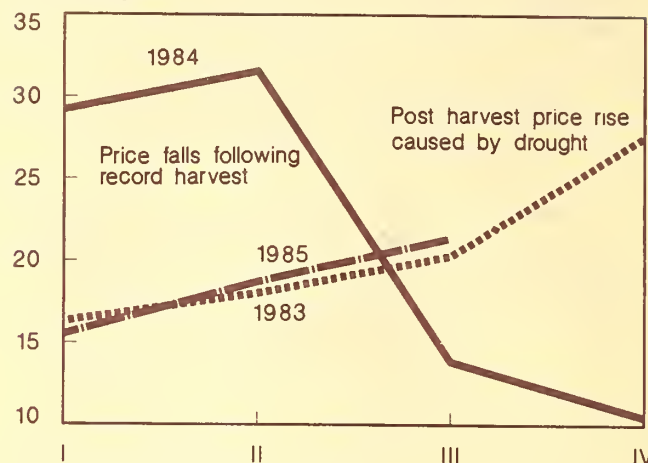
Other factors, such as the Zaire Government's expansionary fiscal and monetary policies, have also come into play and prevented any easy conclusions about the full price impact of reforms. There is also evidence that some real wages have increased recently, so that the ability to purchase food—at least for some employed in the formal sector—may not have decreased as much as inflation would imply.

Weather and Imports Influence Consumption Patterns

Consumption patterns in Sub-Saharan Africa are sensitive to short-term fluctuations

Retail Prices for Shelled Corn, Ghana¹

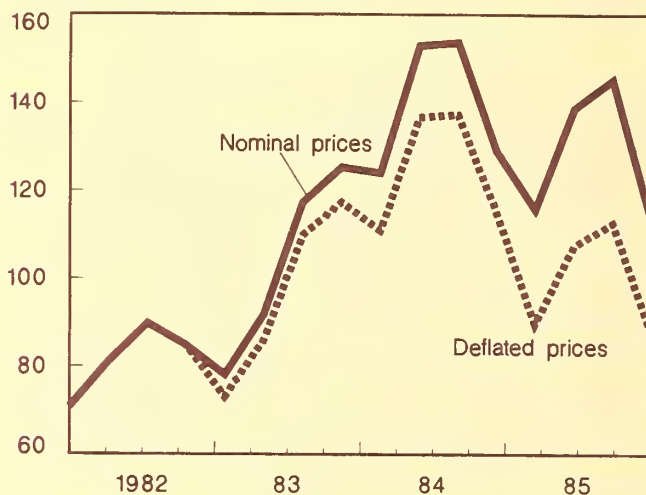
Cedis/kilogram



1/ Quarterly Data for Accra in nominal cedis.

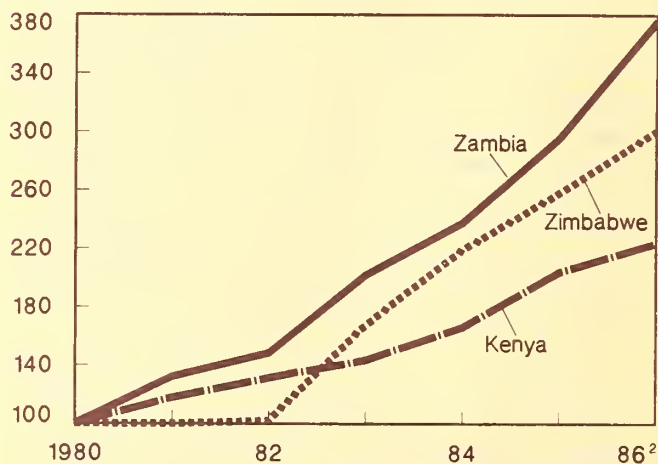
Retail Prices for Millet/Sorghum, Mali, 1982-85, by Quarter

CFA/kilogram



Official Retail Prices for Cornmeal,¹ Kenya, Zambia and Zimbabwe

1980=100



1/ Yearly averages. 2/ First half of year only

in production and imports. Many of the changes associated with the recent emergencies are expected to be temporary, but for some people they may be sustained. Over longer periods, urbanization and changes in tastes and preferences also affect the composition of diets.

Analysis usually focuses on grains, the leading staple food in most countries and the major food import throughout the region. Grains comprise about half to two-thirds of total calorie consumption in most of the region. For some countries, or within parts of some countries, roots and tubers are dominant, accounting for similar proportions of calories. Consumption patterns are far from uniform and national average figures can be misleading. Wheat is nearly all consumed in cities, and averages understate urban consumption and overstate rural. This dual pattern is similar for rice, but in certain areas rice is also a rural staple. For the most part, coarse grains or roots and tubers are the major rural foods.

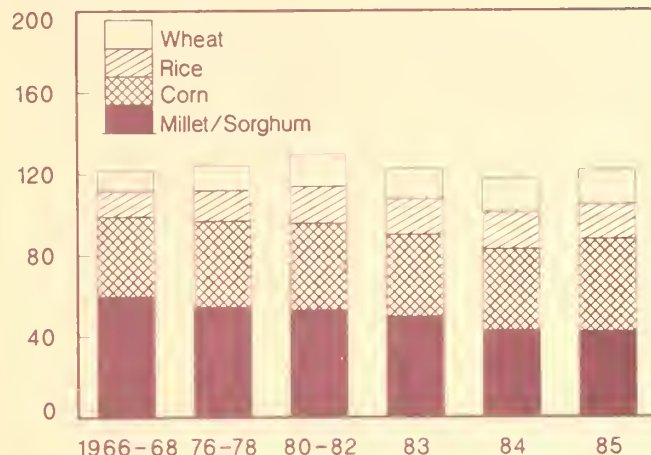
Wheat accounted for 14 percent of overall grain availability in 1985 as consumption continued its upward trend, fueled by imports and food aid. Average per capita consumption of wheat reached a new high of 17 kilograms per year. Per capita rice intake was also 17 kilograms, but this has been decreasing over the last 4 years. This primarily reflects reduced imports, due to financial problems and policy decisions. Leading rice importers, including Nigeria, Senegal, Madagascar, and Ivory Coast, have been scaling down imports in recent years.

Policy decisions are likely to have a stronger role in influencing consumption patterns in the current reform period. The motivation for limiting rice imports may be price, since it is more expensive than other grains. In some cases, rice is perceived as a luxury food for which foreign exchange cannot be justified. Import limits are intended to promote more domestic production.

Although similar decisions might be anticipated for wheat imports, this has not yet occurred widely. Part of this is explained by the widespread inclusion of wheat in food aid, including emergency shipments last year. While influenced by prices, the continuation of large imports by the region may also indicate

Average Per Capita Grain Consumption, Sub-Saharan Africa¹

Kilograms per year



1/ Excludes South Africa

that wheat is considered essential, and that shortages could be politically sensitive. Zambia is one of the only countries that has cut wheat imports recently. The decontrol of retail bread and flour prices in 1984, after subsidies were stopped, has curbed demand while the country has been reducing imports.

Consumption of corn, which dominates diets in Southern and parts of East Africa, rose to a record in 1985 following the big jump in production. Imports of corn play a comparatively small role for the region and fluctuate widely. Per capita consumption averaged over 45 kilograms for 1985. Combined millet and sorghum consumption dropped to about 42 kilograms, reflecting the drought and an underlying longer term decline. Over the last 20 years, per capita intake has fallen nearly 25 percent. A sizable increase for millet and sorghum will occur this year, though, and consumption should exceed 50 kilograms.

In areas of the region that suffered severe food deficits, there were some shifts in consumption as well as reductions in food intake. The use of substitutes for normal staples sometimes meant heavier consumption of roots and tubers rather than grains. This appears to be the case in rural Angola and Mozambique. However, this was not an option in some of the worst affected areas of Ethiopia and Sudan, where roots and tubers are not grown. Output of alternatives such as pulses also was reduced, as with grains. In some places, people turned to "famine" foods such as wild fruits, but there is no systematic

way to evaluate this and information is primarily anecdotal.

The most striking consumption changes have been among nomadic herders who were forced by drought to move to towns or even into feeding camps. Unable to maintain traditional diets largely based on animal products, they must consume more grains. In Mauritania, prolonged drought has resulted in a decline in nomadic herding and a permanent change in diet. Many pastoralists in the Horn of Africa have also experienced this type of change.

Reliance on food aid supplies often has resulted in substituting wheat for the usual coarse grains, at least temporarily. Wheat has traditionally been the chief aid commodity in Sub-Saharan Africa, but under the emergency conditions of the last 2 years, there was a dramatic rise in coarse grains and an attempt to maintain diet preferences. Some adjustments were still common, such as yellow corn being consumed in place of the preferred local white. While predominantly grains, food aid also consists of high protein foods such as dairy products and blended foods. These are often targeted for vulnerable segments of the affected population.

Nutritional Issues Pressing

The current recovery in the region's food supplies will not eliminate chronic nutritional weaknesses. The nutritional status of people in the region is widely considered poor, as indicated by average calorie intake. The typical pattern of low and uneven food consumption, combined with large variations in food production and availability, makes the region vulnerable to further short-term food emergencies.

Measurement problems make nutritional analysis difficult in Sub-Saharan Africa. Determining calorie requirements itself is often a problem, as well as determining actual intake. These requirements may differ by country, reflecting various population characteristics, such as age, the environment, and physical activities which vary by season. The effects of a decline in consumption during an emergency will depend heavily on the previous nutritional status of the person, with children highly vulnerable to long-term physical damage from hunger.

Food aid has played a large role in assuring a minimum level of consumption in much of the region. Emergency rations are usually aimed at some basic maintenance level of calories below the United Nations' FAO/WHO recommended requirements. There are many instances where severe stress has occurred and higher rations are used, particularly for malnourished children. Food aid also includes supplementary feeding programs outside of emergency situations, targeted to reach parts of the population with special needs, but these are not sufficient to eradicate malnutrition.

There are severe nutritional shortfalls in many of the countries in the region. According to the 1986 *World Food Needs and Availabilities*, Sub-Saharan Africa's overall import requirements for 1986/87 to meet minimum recommended FAO calorie levels are 74 percent higher than those needed to maintain historical "status quo" consumption levels. While nearly all countries' nutritional requirements exceed their status quo needs, requirements to achieve FAO norm consumption levels were more than double for such countries as Chad, Ethiopia, Kenya, Mali, Mozambique, and Somalia. The widespread incidence of disease, high mortality rates among children, and low average life expectancy are prominent indications that malnutrition remains.

South Africa Consumption Up Slightly in 1985

Consumption trends in South Africa have been similar to the rest of Sub-Saharan Africa in many respects. Weather and recession have been important influences in the short term, and uneven distribution is also a major issue. Nevertheless, per capita grain consumption in South Africa, after deducting for feed use, equals or exceeds that of other countries in the region, even though diets tend to be more diversified. However, uneven distribution appears to be more pronounced in South Africa because of more skewed income distribution.

In recent years, when local production has affected by drought, grain consumption has declined. Average per capita consumption of all grains in 1983-85 dropped to 186 kilograms per year, 12 percent below the average of the previous 5 years. Despite a recovery in 1985 production, per capita corn consumption

increased only slightly to 109 kilograms, remaining much lower than the average of previous years. South Africa's recession, along with sharply higher retail prices, may account for this. South Africa is more industrialized and urbanized than the rest of Sub-Saharan Africa, so that the effects of recession may be more obvious. There are also more chronic distribution problems, particularly in impoverished rural areas, some marginally fit for crop production. Hunger problems are reported in these areas. Despite better crops in 1985, rural standards of living suffered as remittances from urban relatives dropped.

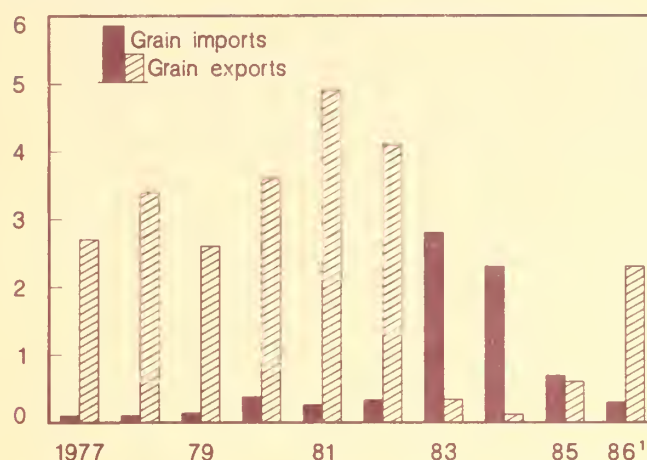
South Africa also differs from the other countries in having a much higher consumption of wheat, almost all grown domestically. Wheat consumption was fairly steady up to the 1980's, at about 30 percent of total grain. Although consumption has declined since 1980, wheat's share of total grains rose to 40 percent in 1983 and 1984, reflecting a greater drop in corn consumption. Supplies of white corn, preferred for human consumption over yellow, have been short in the last 3 years and partly explain this. Prices for grains have been raised substantially in recent years, with the nominal price for corn doubling since 1980 and that for wheat up by 75 percent.

Grain supply and utilization, South Africa

Year	Prod.	Ending stocks	Im-ports	Ex-ports	-Consumption- total	Per cap.
-----1000 tons-----						Kg.
TOTAL GRAINS						
1966-68	8,103	1,892	471	2,190	4,426	213
1976-78	11,439	2,379	701	2,623	5,667	212
1980	12,959	2,435	381	3,687	5,744	200
1981	17,530	5,516	265	4,961	5,927	201
1982	11,045	2,505	335	4,191	6,928	230
1983	6,086	709	2,829	342	6,026	195
1984	7,104	999	2,327	119	5,543	175
1985	10,061	2,126	690	601	6,083	187
WHEAT						
1966-68	957	260	346	0	1,323	64
1976-78	1,930	704	0	170	1,778	63
1980	1,470	320	255	13	1,993	66
1981	2,340	787	131	6	1,998	65
1982	2,420	1,064	59	157	2,045	63
1983	1,809	667	282	104	2,384	62
1984	2,224	720	118	110	2,179	64
1985	1,665	465	300	45	2,175	66
CORN						
1966-68	6,732	1,529	46	2,017	2,778	133
1976-78	9,081	1,564	0	2,334	3,661	137
1980	10,794	1,952	0	3,444	3,477	121
1981	14,645	4,545	0	4,955	3,657	124
1982	8,355	1,333	130	4,034	4,637	154
1983	4,083	42	2,389	238	3,735	121
1984	4,405	264	2,008	9	3,122	99
1985	7,755	1,625	200	406	3,538	109

South Africa's Total Grain Trade

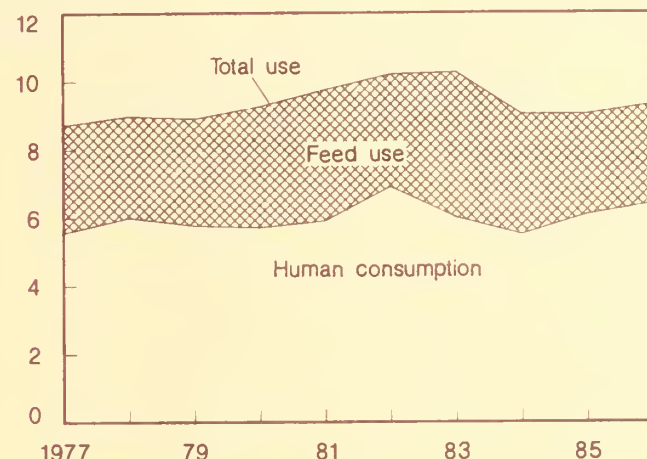
Million tons



1/ preliminary.

South Africa's Total Grain Utilization¹

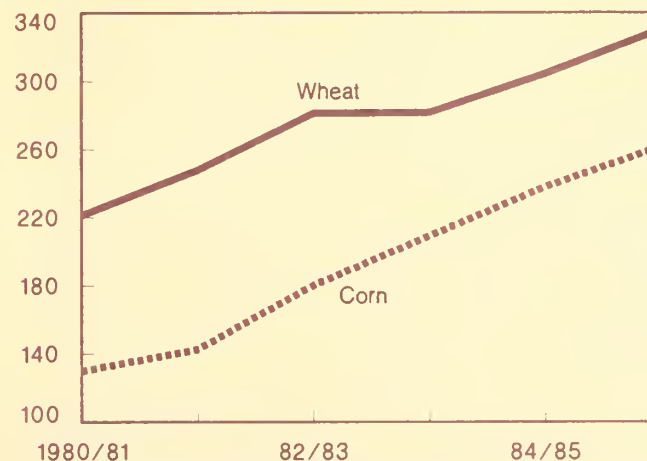
Million tons



1/ Excludes rye and oats. 1986 preliminary

Retail Prices for Wheat and Corn,¹ South Africa

Rand/ton



1/ Based on selling prices of the marketing boards.

Midway through the current year, the region's weather has been generally favorable for agriculture. Carryover stocks and anticipated imports are sufficient for many countries to maintain consumption even if production drops below the 1985 record level.

However, major problems are expected to continue in Angola, Mozambique, Ethiopia, and Sudan, where nonweather factors are also critical in limiting food availability. Improvements in warning systems and in monitoring food supplies should help to detect new crises early, but this does not guarantee a timely and sufficient response by itself. No quick end to Sub-Saharan Africa's financial crisis is in sight, suggesting that increasing consumption for many people will be difficult. Distribution and nutrition issues will remain formidable.

Over the next few years, food availability in Sub-Saharan Africa will fluctuate substantially, judging by the patterns of previous years. Over the last decade, even including the excellent outturn of 1985, the region's production has lagged population growth. In the same period, imports increased at an average annual rate of 20 percent. Even though the region's production should benefit from the policy reforms promoting agriculture, high population growth—forecast at 3 percent per year through 1990—will keep pressure on supplies.

The growth rate of grain imports is expected to slow, as some countries reduce imports. However, imports will continue to play a critical role in consumption patterns. ERS baseline forecasts of grain availability, with optimistic assumptions about production, indicate that the share of imports in the region's consumption is unlikely to decrease by 1990. [*Peter A. Riley (202) 786-1680*]

LOWER PETROLEUM PRICES A MIXED BLESSING FOR REGION

Petroleum is by far Sub-Saharan Africa's most important export, and accounts for over half of the region's export earnings. The recent oil price decline will hurt the region's terms of trade and ability to import. The direct effects of lower oil prices are concentrated in Nigeria, the region's largest economy and the biggest oil exporter. Virtually all of Nigeria's foreign exchange earnings come from petroleum sales, so lower revenues have translated directly into lower imports.

The Congo, Angola, and Gabon are also highly dependent on oil earnings and will be severely affected by lower earnings. Ivory Coast, while not a major petroleum exporter, borrowed heavily in the 1970's on expectation of high oil export earnings, which have not materialized. Because of its heavy debt load, the drop in oil prices will further curtail its room to maneuver and its ability to import. Cameroon, by contrast, is a minor exporter which has taken a conservative approach to foreign borrowing. Consequently, the fall in prices will not greatly affect Cameroon.

During the 1970's, many oil importing nations invested in oil refining, allowing them

to capture the value added in the refining process. Economies of scale led Kenya and Senegal to re-export refined products. Thus, while they are not oil producers, both nations are oil exporters and will be adversely affected by the downturn in oil prices and the heightened competition in the refined products market. Most African nations are net oil importers and will benefit directly from lower oil prices. However, the savings from these imports will hardly offset the losses incurred by the major oil exporters.

For individual oil importing nations, this is a windfall savings but it is generally insignificant in terms of the national economy. Energy imports generally comprise less than a quarter of total merchandise imports in African nations. At most, African oil importers will have an effective savings of about 5 percent of their total merchandise import budget. Much of the allocation of this savings will be absorbed by debt service obligations and perhaps larger petroleum imports. Agricultural imports typically account for less than one-fifth of total merchandise imports; consequently, the income effect of lower oil prices will likely yield only about a 1 percent increase in expenditure on agricultural imports. [*David W. Skully (202) 786-1680*]

EXPORT PRICE TRENDS THREATEN FOREIGN EXCHANGE EARNINGS

Production of Sub-Saharan Africa's major export commodities showed mixed trends in 1985, reflecting the diverse influences of weather, prices, and input availabilities in producing countries. Output of coffee, cocoa, and sugar declined, while output of cotton, peanuts, and tea rose. Exports increased for coffee and cotton, but declined for cocoa. In 1986, lower world price will reduce export earnings for most commodities, except for coffee.

Agricultural exports play a critical role in the region because of their major contribution to overall export earnings. Many countries are attempting to increase their output and exports, often as part of economic stabilization and reform programs. Yet unfavorable world market conditions for many commodities jeopardize the potential gains of export expansion, and could lead policymakers to reconsider decisions about resource allocations.

Because exporting raw commodities is one of the few sources of foreign exchange available to African countries, their economies are vulnerable to world price changes. Furthermore, the nature of world commodity markets for most African exports generates significant price volatility, to which African economies must constantly adapt. Two factors largely account for this price instability: the structure of demand and supply for African commodity exports, and the small size of Africa's world market share.

The mixed record of export crop production in 1985 contrasts with the dramatic gains in food crop production. One reason for this is the differential impact of weather. Most tree crops are grown in areas with higher and more reliable rainfall than cereal crops, and display less variability. Another major export crop, cotton, resists drought better than many cereals and output also tends to be less variable. Similarly, much of the region's sugarcane is irrigated. This discussion focuses on the region's major exports.

Agricultural Commodities Dominate Exports in Most Countries

Coffee, cocoa, tea, cotton, tobacco, and sugar are the region's most important foreign exchange earners after petroleum. Exports tend to be relatively undiversified, with one or two commodities providing most of these countries' earnings. In the last two years, Ivory Coast has emerged as the region's largest agricultural exporter, with exports of over \$2 billion in 1985. South Africa, formerly the largest, has slipped as its exports have dropped by more than half in dollar terms from the early 1980's. The next largest exporting countries are Kenya, Cameroon, Sudan, and Zimbabwe.

Coffee is an important foreign exchange earner for 10 countries. In 1985, coffee's share of total exports ranged from 80-90 percent in Uganda and Burundi to less than 20 percent in Cameroon. Ivory Coast is the largest exporter, earning over \$600 million from coffee in 1985, or 21 percent of its total export earnings. Although cocoa is one of the top exports of only two countries, Ivory Coast and Ghana, the value of these exports reached \$2 billion in 1985. Ivory Coast alone earned more than \$1 billion from the export of cocoa and cocoa products. Ghana's cocoa earnings are much lower—about \$400 million—but this accounts for two-thirds of the country's revenues. Cotton supplies about 85 percent of Chad's export revenues and about 60 percent of Sudan's, while tea is an important export crop for Kenya and Malawi. Sugar dominates the exports of Mauritius and Swaziland.

In contrast to this pattern, South Africa's agricultural exports are more diversified and contain more processed products. For 1985, wool, fruits and products, sugar, and mohair

Value of total agricultural exports
of selected African countries

Country	1980	1981	1982	1983	1984	1985
\$ Million						
Ivory Coast	2,006	1,692	1,413	1,273	1,780	2,000
South Africa	2,517	2,274	1,833	1,321	1,064	1,008
Kenya	693	616	591	624	721	670
Cameroon	699	471	389	392	565	520
Sudan	553	475	498	506	519	500
Zimbabwe	444	617	517	470	468	450
Tanzania	408	466	400	340	350	295
Uganda	344	244	346	365	375	350
Ethiopia	391	345	369	362	364	460
Nigeria	455	439	358	416	328	350

1985 preliminary.

SOURCES: FAO, 1984 *Trade Yearbook* and ERS.

were the leading exports. Up to 1982, before the major drought, corn had been the largest agricultural export. Despite the high value of South Africa's agricultural exports, these account for a relatively small share of the country's total exports because of the dominance of minerals. This share fell to less than 10 percent during the recent drought years. Zimbabwe also has a more diversified portfolio of agricultural exports than is typical, including tobacco, cotton, sugar, beef, coffee, tea, and corn. Flue-cured tobacco is the major commodity by far, and Zimbabwe plays a major role in world markets.

Coffee Output Falls Slightly But Export Outlook Improves

Africa's coffee output increased slightly in 1985/86. West African coffee production fell from the previous year, as lower output in Cameroon outweighed production gains in most of the other West African countries. Production fell 15 percent in Cameroon, where this is an off year in the coffee cycle. Crop quality also fell because of increased moisture and pest damage. Coffee output held steady in Ivory Coast, and good weather helped bean quality.

Share of foreign exchange earnings from major commodity exports

Commodity & country	1983			1984			1985 2/		
	---Earnings---		Commodity share	---Earnings---		Commodity share	---Earnings---		Commodity share
	Total	Commodity		Total	Commodity		Total	Commodity	
	-\$ million-	Percent		-\$ million-	Percent		-\$ million-	Percent	
Coffee 1/									
Angola	NA	71	NA	NA	80	NA	NA	75	NA
Burundi	80	70	87.9	99	83	83.8	102	85	83.3
Cameroon	1,614	197	12.2	1,802	205	11.4	2,041	200	9.8
Ethiopia	403	252	62.6	417	265	63.5	400	240	60.0
Ivory Coast	2,092	452	21.6	2,591	455	17.6	3,029	635	21.0
Kenya	981	241	24.5	1,079	283	26.2	957	215	22.5
Madagascar	310	113	36.5	333	147	44.1	309	117	37.9
Rwanda	124	82	65.7	143	94	65.6	125	86	68.8
Tanzania	379	130	34.3	370	145	39.2	326	130	39.9
Uganda	372	339	91.2	399	354	88.7	376	340	90.4
Cocoa 1/									
Ghana	440	276	62.7	566	382	67.5	630	403	64.0
Ivory Coast	2,092	530	25.3	2,591	1,069	41.3	3,029	1,100	36.3
Togo	231	15	6.3	240	48	20.1	244	50	20.5
Tea									
Kenya	981	186	18.9	1,079	263	24.4	957	234	24.5
Malawi	230	48	20.7	303	80	26.4	240	55	22.9
Cotton									
Benin	128	12	9.6	170	26	15.2	177	30	17.0
Burkina	126	31	24.8	129	44	34.0	127	110	86.3
Chad	75	59	78.7	112	96	86.1	69	54	78.3
Mali	167	71	42.4	177	99	55.8	166	84	50.3
Sudan	514	305	59.2	519	290	55.9	500	200	40.0
Zimbabwe	1,154	73	6.3	1,174	81	6.9	1,086	94	8.7
Peanuts 1/									
Gambia	83	25	30.1	88	25	27.7	57	85	149.9
Senegal	569	156	27.4	556	130	23.4	526	75	14.3
Sugar									
Mauritius	339	234	69.1	350	194	55.4	380	180	47.4
Swaziland	310	110	35.4	272	92	33.9	270	85	31.5
Tobacco									
Malawi	230	116	50.6	316	163	51.6	260	115	44.2
Zimbabwe	1,154	230	20.0	1,174	231	19.7	1,086	220	20.3

NA=not available

1/ Includes products. 2/ Preliminary.

SOURCES: IMF and ERS.

East African coffee production rose, reflecting a near-record crop in Kenya in 1985. The good harvest followed good weather, higher prices, and more reliable payments to producers. In addition, Kenya's new plantings are starting to mature, with up to a 40-percent increase in yields. These accounted for part of the jump in 1985 coffee output and should contribute to higher production in 1986. Uganda's coffee output fell, reversing its steady recovery since 1978.

Africa's coffee earnings should rise in 1986 as producing countries take advantage of the favorable world price and the suspension of export quotas of the International Coffee Organization (ICO). Earnings of major exporters will approach \$2.5 billion, up over 15 percent from 1985. Some producers including Ivory Coast, Kenya, and Tanzania will increase sales by drawing down stocks. Kenya should reach record export levels in 1986. Exports from Uganda are likely to be constrained by political insecurity, and those from Zaire, Rwanda, and Burundi by transport problems. Tight supplies and almost depleted stocks will prevent much expansion of exports from Cameroon and Ethiopia, both of which have fallen short of past ICO quotas because of poor harvests and transportation bottlenecks.

The coffee price rise began in late 1985 in response to a severe drought in Brazil which

affected arabica supplies. Robusta exporters, particularly Ivory Coast and Cameroon, will derive less benefit from recent price movements than will arabica suppliers. Arabica had a 50-percent price advantage over robusta in April 1986, compared to 20 percent a year earlier. Many countries have large stocks of coffee which can be drawn down to meet current demand. By mid-July, prices had fallen to within 10 cents of the ICO trigger price, and quotas could be reinstated in the next few months. While coffee supplies, especially arabica, will remain tight for the next year, the outlook is for recovery of Brazilian production in 1987.

Cocoa Output Falls Slightly; Earnings Likely To Decline

Africa's cocoa production declined slightly in 1985 to just over 1 million tons. Lower output in Ivory Coast, the world's leading supplier, and in Nigeria overshadowed gains in Africa's two other main producers--Ghana and Cameroon. While the weather was good all along the West Africa coast, a number of other factors were important in the performance of the major cocoa producers.

Output fell slightly in the Ivory Coast but was still the second largest crop ever. The smaller crop in Nigeria was caused by a

Sub-Saharan Africa's coffee production and exports

Country	1980/81	81/82	82/83	83/84	84/85	85/86
1000 tons						
PRODUCTION						
Angola	35	24	20	16	16	15
Cameroon	112	117	110	60	126	114
Ethiopia	202	202	198	201	155	186
Ivory Coast	365	250	271	85	277	280
Kenya	92	102	92	134	93	116
Tanzania	58	64	62	51	53	57
Uganda	123	128	180	192	198	180
Zaire	88	80	81	81	92	91
Other	220	258	243	238	212	235
Total	1,295	1,225	1,257	1,058	1,222	1,274
EXPORTS						
Angola	42	49	28	25	19	18
Cameroon	94	95	98	95	90	111
Ethiopia	88	80	91	98	69	99
Ivory Coast	219	288	251	255	231	263
Kenya	73	102	86	91	96	114
Tanzania	61	59	53	52	50	60
Uganda	118	167	132	151	150	138
Zaire	62	69	67	71	70	74
Other	160	201	184	173	229	195
Total	916	1,109	990	1,012	1,004	1,072

SOURCE: ERS

Sub-Saharan Africa's cocoa production and exports

	1980/81	81/82	82/83	83/84	84/85	85/86
1000 tons						
PRODUCTION						
Ivory Coast	412	456	360	405	552	540
Ghana	258	225	179	159	173	212
Cameroon	120	120	120	106	120	115
Nigeria 1/	155	183	156	115	150	95
Togo	16	11	10	15	15	15
Other	31	35	31	20	30	27
Total	992	1030	856	820	1040	1004
EXPORTS						
Ivory Coast	474	364	324	434	539	525
Ghana	199	246	160	150	150	200
Cameroon	92	76	84	115	100	105
Nigeria	120	148	181	117	140	85
Togo	18	10	9	13	13	13
Other	51	39	53	48	50	50
Total	954	883	811	877	992	978

1/ Nigeria production excludes 10,000-20,000 tons marketed in Benin (1984/85 and 1985/86).
Note: For 1980/81 to 1983/84, exports are calendar year corresponding to second half of split year.

SOURCES: FAO, FAS, and ERS estimates.

shortage of inputs, continued lack of tree maintenance and increased smuggling of cocoa exports through neighboring Benin as the naira weakened. Ghana harvested its largest crop since 1981/82. The increase is attributed to good weather, higher producer prices, less smuggling, and bumper food crops in 1984 and 1985 that lowered food prices and made cocoa production relatively more profitable. Good weather and adequate inputs contributed to Cameroon's two consecutive good harvests.

Although prices are currently lower, foreign exchange earnings for 1985/86 will be quite stable. Most exports were sold early in the season in anticipation of price declines. Ghana's exports should increase, but earnings will fall short of earlier projections. Prices fell about 7 percent in 1985 to an average of \$1.08 per pound for Ghanaian cocoa, which usually sells at a premium. By June 1986, the price had fallen to below \$.90 per pound.

Overall cocoa production should be normal in 1986/87 because of good weather early in the season. Continued decline in Nigeria will be more than offset by Ghana's recovery, supported by aggressive pricing policies leading to a longer term revitalization of its cocoa sector. The outlook for 1986/87 is for prices to remain low if production is near normal, because of instability in the world market following the breakdown of the International Cocoa Agreement negotiations.

The current International Cocoa Agreement expires in September 1986. If the agreement is not renewed, the 100,000-ton buffer stock will have to be liquidated. Even a gradual disposal of these stocks would tend to hold prices down. The outlook for a new agreement depends heavily on the position of Ivory Coast, the largest producer, and not a member of the present agreement. Ivory Coast announced in March 1986 that it would not participate in further discussions of a new agreement because the price range was too low. The country has since softened its position and is taking part in current negotiations.

Cotton Output Begins To React to Weak Market

Africa's cotton production fell 5 percent in 1985, reflecting a big decrease in Sudan. Cotton emerged as a success story

Sub-Saharan Africa's cotton production and exports

	1980/81	81/82	82/83	83/84	84/85	85/86
	1000 tons					
PRODUCTION						
Burkina	23	22	29	30	34	39
Cameroon	33	31	28	32	36	35
Chad	33	27	39	60	35	40
Ivory Coast	56	57	64	58	88	79
Mali	42	37	49	53	51	65
South Africa	58	36	29	34	45	54
Sudan	96	154	199	218	206	148
Tanzania	54	45	43	47	49	42
Zimbabwe	64	70	56	91	93	108
Other	153	215	184	164	198	186
Total	611	695	720	788	835	797
EXPORTS						
Burkina	21	20	28	27	27	28
Cameroon	27	25	23	21	22	28
Chad	33	25	38	44	38	38
Ivory Coast	43	40	49	41	44	54
Mali	38	35	47	53	44	44
South Africa	0	0	0	0	0	0
Sudan	93	59	139	219	128	152
Tanzania	39	37	24	29	30	27
Zimbabwe	51	51	38	57	60	78
Other	42	47	68	65	65	74
Total	387	339	454	556	458	524

SOURCE: ERS

in Africa's agricultural development in recent years, as intensive government efforts in some of the other major producing countries achieved big gains in yields and output. But, these production gains are now becoming less desirable in view of the world oversupply and low prices. Serious adjustment problems are confronting this sector, as falling world prices make African production less competitive. Output should drop in 1986 despite good weather early in the season, as producer prices are unlikely to increase in many countries.

Sudan is Sub-Saharan Africa's leading cotton producer and exporter. Sudan's cotton output plummeted in 1985 as the government's shift of irrigated farmland into food production caused cotton area to shrink 15 percent. The shift was a response to the increasing financial burden posed by Sudan's large cotton stocks. Quality was also poor due to pests and input shortages. Sudan had bypassed earlier sales opportunities in hopes of some recovery in world prices, but recently began to export at a loss.

The leading cotton producers in West Africa and the Sahel include Ivory Coast, Mali, and Chad. Output in these subregions rose 28 percent to 365,000 tons during the last 3 years. High producer prices and good weather were partly responsible. Another important factor was an increase in yields as many

farmers boosted their use of improved inputs. In Cameroon and Burkina, successful parastatals have been very effective in supervising small farm production and providing inputs and extension. Output in Chad remains highly variable because of weather and military conflict. In 1985, output rose 30 percent, but the total was still below the 1983 harvest.

Cotton production has been a remarkable success in Zimbabwe, with output nearly doubling in the past decade. Cotton is currently the second most important export crop, following tobacco. Growth has been fueled by the response of communal and smallscale producers to price incentives, targeted extension and training programs, and expanded infrastructure.

Most African cotton producers grow a high-quality cotton which finds a ready market in Europe. This premium trade has been somewhat insulated from the recent price declines for most cotton grades. Nevertheless, even these exporters will still have difficulty adjusting to lower world prices, mainly because of their high marketing costs. In West Africa, export costs in recent years were estimated at 60 to 70 cents per pound, with Chad's costs even higher. Most countries will not be able to significantly reduce these costs since they are small producers with relatively inefficient marketing systems.

World cotton prices in 1985 were unfavorable, dropping to 60 cents per pound, only 64 percent of 1980 prices. The outlook is for prices to fall further throughout 1986 as the U.S. farm bill makes U.S. cotton more competitive in world markets. Prices are currently averaging below 50 cents, and may drop as low as 30 cents later in the year. Most countries will have to subsidize or cut back exports and many African countries will have to choose the latter. More domestic processing and regional exports would allow the countries to maintain production.

Sugar Production Stagnates

Last year's Sub-Saharan African sugar output, 6.5 million tons, was about the same as the year before. Production stagnated in most countries because of a variety of factors, including unattractive prices and low investment. For example, output fell 10

percent in South Africa, Africa's leading sugar producer, as prospects for exports remained poor. Ivory Coast has closed some of its sugar mills because of the lack of markets. Sudan is still expanding production and replacing worn out processing machinery.

Like cotton, sugar has been a recent success story in some small producing countries, where efficient parastatals have contributed to increased yields and output. Sugar industries in Zambia, Malawi, Cameroon, and Burkina, for example, have reduced their dependence on sugar imports and permitted some exports. However, the timing of these gains was unfortunate, coinciding with a glut in the world market. Despite very high yields in many African countries--among the world's highest for irrigated producers such as Zambia and Zimbabwe--high production and transport costs make it difficult for most African countries to export profitably.

Sugar prices peaked at 45 cents a pound in 1980, but then fell steadily to 3 cents a pound in 1985. They have recovered gradually since then, but large world stocks have kept prices below 9 cents, generally regarded as the least cost of production. The sugar market is kept from clearing because of protective programs in the United States and the European Community. Since 1981, nations have been allowed to export sugar to the United States only if they are granted a quota. Because U.S. demand for sugar is declining, the United States recently reduced these import quotas. Most African exporters lost about one-third of their revenue from sales to the United States, although exports under quota have been at prices three to four times the world price.

The European Community also purchases sugar at preferential prices from former colonies, such as Mauritius and other African countries, which are signatories of the Lome trade agreements. However, like U.S. imports, these sales to the EC are essentially constrained by quota, and higher sugar production cannot be translated into higher sales.

Peanut Output Up, But Vegetable Oil Prices Down

Sub-Saharan African peanut output rose in 1985 in two of the three major producers.

Senegal's production rose slightly to 580,000 tons, despite a decline in area. Good weather and a southward movement of peanut production to higher rainfall areas accounted for the good harvest. Official marketings for crushing nearly doubled because the pricing structure was revised to make peanut sales more profitable than sales of home-processed peanut oil. Peanut oil exports are expected to double to 100,000 tons in 1985/86. Large gains in palm oil production in Malaysia and Indonesia has been instrumental in forcing down world prices for all vegetable oils, including peanut oil from Senegal and Gambia.

Peanut production in Nigeria rose in 1985, as area expanded in response to the increased producer price and production recovered from a plant disease that lowered 1984 output. Nigeria's production is nevertheless inadequate to meet domestic consumption requirements. The price effect of the January 1986 ban on vegetable oil imports is likely to increase area and output in 1986/87.

Sudan's peanut production continued its steady decline, which began in 1981. Seed shortages and displacement of population in western Sudan are factors. Gambia's peanut production recovered in 1985; however, some of its harvest moved across the borders to neighboring countries because of Gambia's weakening currency.

Tea Output Rises

Africa's tea production, centered in East Africa, increased 15 percent in 1985/86, with a record crop in Kenya accounting for most of the rise. Good weather in 1985, combined with successful government programs to increase productivity, achieved a sharp increase in yields. Exports from Kenya, the region's largest exporter, were a record 130,000 tons. Events in the world tea market are dominated by India and Sri Lanka, the world's major exporters. World tea prices have fallen steadily from their record 300 pence/kilo peak during 1984 and have drifted back to 120-150 pence/kilo.

Tobacco Outlook Mixed

Zimbabwe's flue-cured tobacco crop fell 12 percent in 1985 to 105,556 tons as wet weather reduced yields. However, average prices set a record, up nearly 30 percent in

local currency terms. This boosted returns to growers, keeping them ahead of rising costs, and plantings for the 1986 crop rose by 16 percent. Production is estimated at 115,000 tons. Exports for 1985 reached 99,000 tons, worth \$220 million. Prices at the opening of the 1986 auction have been strong and the drought in Brazil should benefit Zimbabwe's exports.

In Malawi, total tobacco output hit a record 77,000 tons in 1985, but export earnings slumped. Production for 1986 is estimated to have held steady. Following rapid increases in output, Malawi ranked fourth among world burley producers in 1985. However, the Government now controls smallholder burley production because of limited export opportunities.

Grain Exporting Resumes Following Bumper Harvests

Exports of coarse grains from Sub-Saharan Africa will increase dramatically this year following the region's recovery from drought. South Africa will account for the lion's share, with sales of corn likely to reach 2.2 million tons. In addition, seven other countries--Benin, Ivory Coast, Kenya, Malawi, Sudan, Togo, and Zimbabwe--have an exportable surplus for 1985/86, estimated by the FAO at 2.5 million tons. Most of this consists of corn, with smaller amounts of sorghum. However, only one-third of this amount had been sold as of June, and prospects for exporting the entire surplus are slight. Furthermore, with world prices for grain low, foreign exchange earnings will not be that large.

The bulk of South Africa's exports will go to Japan and Taiwan, with minor amounts to neighboring countries in the region. South Africa will re-emerge as a net grain exporter for the first time since 1982/83. Although South Africa regularly subsidized corn exports in the past, depreciation of its currency now encourages exports. At current exchange rates, the producer price is equivalent to about \$90 per ton.

Because of the large-scale exports of South Africa, Sub-Saharan Africa has normally been a net corn exporter, with the drought-affected years of 1983-85 being the exceptions. Aside from South Africa, few

other countries in the region have been consistent exporters of significant amounts of coarse grains, though. In recent years, Zimbabwe and Malawi are the only countries that have regularly exported, with some others entering the export market more sporadically. There are also unofficial transactions between many countries, but these are fairly small and undocumented.

Two factors explain the relatively small grain export trade. First, few countries have available surpluses on more than an occasional basis, and thus most are not able to become reliable exporters. Second, African grain is rarely competitive on world markets because of high costs, while importers within the region have limited commercial capacity.

When supplied to neighboring countries, these grains are generally preferred to grains originating outside the region. However, difficult logistics and high costs constrain moving the grain into deficit countries given the severe lack of foreign exchange. Special external assistance has been required in many instances to finance intraregional exports. These triangular transactions have consisted both of a donor paying for grain and/or transportation to deficit countries and of a donor swapping wheat or rice for coarse grains for deficit countries. Through June, triangular arrangements have accounted for less than 250,000 tons of coarse grain exports, less than half of commercial sales of 550,000 tons.

Producer Prices Continue To Rise in 1985/86

Producer prices for Africa's major export crops rose in 1985/86, continuing the effort in most countries to encourage cash crop

production and export. Because of unfavorable world prices for many commodities, though, governments cannot continue to raise guaranteed prices. Producers in most countries are insulated from world prices. Few prices are determined freely, as in tea and coffee auctions in Kenya and tobacco in Zimbabwe.

Producer prices for coffee rose in all African exporting countries in 1985/86. Ivory Coast boosted producer prices for the current season by 5 percent to 400 CFA per kilogram. Kenya's producer prices are set according to quality and auction returns. Prices started to rise in 1985 in line with world price increases. For 1986 Kenya's coffee producer prices are rising because of favorable export prices. From the beginning of the ICO year in October 1985 to early March 1986, Kenya's average coffee auction price rose by 105 percent, to a high of about \$2.60 per pound. It began easing only in April. However, producer export taxes and other taxes have recently been hiked, thus reducing net producer prices.

In spite of the uncertain outlook for world cocoa prices, most West African countries raised their producer prices for the 1985/86

Producer prices for cocoa, selected Sub-Saharan African countries 1/

	Cameroon		Ivory Coast		Ghana		Nigeria		World price 2/	
	CFA	\$	CFA	\$	Cedis	\$	Naira	\$	\$	cents
-----Price per kilogram-----										
										Pound
1980/81	300	1.10	300	1.10	4	1.45	1.30	2.13	2.23	101
1981/82	310	0.94	300	0.91	12	4.36	1.30	1.94	1.89	86
1982/83	330	0.87	300	0.79	12	3.48	1.30	1.81	2.24	102
1983/84	370	0.85	350	0.80	20	0.57	1.43	1.85	2.56	116
1984/85	410	0.91	375	0.83	30	0.61	1.50	1.68	2.38	108
1985/86	420	1.17	400	1.11	56	0.77	1.60	1.60	2.21	100

1/ World prices are calendar year. 2/ Ghana (London).

Producer prices for coffee, selected Sub-Saharan Africa countries 1/

	Cameroon		Ivory Coast		Kenya		Tanzania		Uganda		Zimbabwe		World Price 2/	
	CFA	\$	CFA	\$	K.Sh.	\$	T.Sh.	\$	U.Sh.	\$	Z\$	\$	\$	cents
-----Price per kilogram-----														
														Pound
1980/81	320	1.18	300	1.10	22.58	2.50	12.55	1.52	7.00	0.95	2.30	3.59	2.55	116
1981/82	330	1.00	300	0.91	27.80	2.55	14.90	1.61	20.00	0.40	2.01	2.91	2.77	126
1982/83	350	0.92	300	0.79	34.88	2.62	15.09	1.32	50.00	0.53	2.41	3.18	2.82	128
1983/84	390	0.89	350	0.80	38.44	2.67	22.87	1.50	80.00	0.52	2.34	2.31	3.11	141
1984/85	430	0.96	380	0.85	41.52	2.53	29.40	1.68	130.00	0.36	2.04	1.65	2.94	133
1985/86	440	1.22	400	1.11	53.98	3.31	35.30	1.91	270.00	0.40	2.64	1.64	3.86	175

1/ World prices are calendar year. 2/ All coffee (New York).

Producer prices for cotton, selected Sub-Saharan African countries 1/

Burkina		Chad		Ivory Coast		Mali		Sudan		Tanzania		Uganda		Zimbabwe		World Price 2/	
CFA	\$	CFA	\$	CFA	\$	CFA	\$	Ls	\$	T.Sh	\$	U.Sh.	\$	Z\$	\$	\$	cents
-----Price per kilogram-----																	Pound
1980/81	55	0.20	50	0.18	80	0.29	55	0.20	0.47	0.94	3.2	0.39	6	0.81	0.38	0.59	1.85 84.0
1981/82	62	0.19	60	0.18	80	0.24	65	0.20	0.72	1.20	3.7	0.45	15	0.30	0.40	0.58	1.60 72.5
1982/83	62	0.16	70	0.18	80	0.21	65	0.17	0.73	0.70	4.7	0.51	40	0.43	0.52	0.68	1.85 84.1
1983/84	70	0.16	80	0.18	100	0.23	75	0.17	0.89	0.79	6.0	0.53	60	0.39	0.52	0.51	1.78 80.9
1984/85	90	0.20	100	0.22	115	0.26	75	0.17	1.09	0.75	8.4	0.55	120	0.33	0.57	0.46	1.32 59.9
1985/86	100	0.28	100	0.28	115	0.32	85	0.24	1.71	0.68	13.0	0.74	220	0.33	0.67	0.42	1.10 50.0

1/ World prices are calendar year.

2/ Liverpool index.

crop. The Ivory Coast price increased 7 percent, representing a real increase in view of Ivory Coast's low inflation of 2 percent. Producer prices in Cameroon and Nigeria rose only slightly, falling in real terms.

Ghana's huge price increase in 1985--from 30,000 to 56,000 cedis a ton--represented a 53-percent boost in real terms. A further increase to 85,000 has been announced beginning with the 1986 midcrop. Ghana's aggressive cocoa pricing is part of an economy-wide reform effort, in which revitalization of the cocoa sector holds a major role. Ghana's production in 1985 is still only about one-half the level of the mid-1970's.

Recent world price trends have presented Africa's cotton producers with serious adjustment problems, as falling world prices narrowed the margin between producer and export prices. In Chad, export prices are already below the national marketing agency's procurement costs, and the Government has resorted to foreign borrowing to maintain its floor price. In countries such as Chad, where cotton is important to the economy, these financial losses can be sizable. The estimated deficit of Chad's cotton marketing agency in 1985/86 will be equal to one-half the national budget. In Burkina, surpluses generated by cotton export revenues in previous years supported the floor price for 1985, but the outlook for 1986 is uncertain. The Tanzania Cotton Authority, also experiencing large

deficits, may have its marketing role modified by increasing that of cooperatives.

Producer Price Outlook Depends On Exchange Rates and World Prices

The medium-term outlook for producer prices of African export crops depends heavily on two factors: change in African currency values and change in the world prices for these commodities. The effect of falling world prices for many African commodity exports during the early 1980's was partially offset by the appreciating value of the dollar relative to local currencies. African exports are mainly denominated in dollars. Dollar unit value prices were lower, but these earnings had greater domestic purchasing power--including the ability to support moderate increases in producer prices.

The declining value of the dollar began to cause some African currencies to appreciate in dollar terms in 1985, and this accelerated in early 1986. The falling value of the dollar will reduce the domestic purchasing power of African export earnings, including the ability to support producer price hikes. Where the currency shift is combined with falling world prices, (such as cotton), the real reduction in foreign exchange earnings will be accentuated. However, higher world prices, for coffee for example, will offset the declining dollar value of export earnings and help to support continued producer hikes. [Mary Burfisher, Peter Riley, David W. Skully, (202) 786-1680]

DECLINING TERMS OF TRADE

Most African economies evolved around the production or extraction of a single commodity desired by European colonial powers—for example, cocoa and oilseeds in West Africa and minerals in Southern Africa.^{1/} These exports remain vital, since the developing Sub-Saharan nations generally cannot produce the capital goods and manufactured products necessary to sustain growth and therefore must import them.

Since the 1950's economists have expressed concern over the terms of trade between the relatively unprocessed commodities exported by developing nations and the manufactured goods exported by developed nations. Specialists feared that raw commodity prices would not keep pace with the price of capital goods, and developing nations dependent on raw commodity exports would find it increasingly difficult to pay for imports.^{2/} This pessimistic view was widely held during the 1960's when most African nations became independent. Consequently, many nations adopted policies to diversify their economies away from a single export commodity. The commodity price boom which started in 1972 improved the declining terms of trade and brought with it a new optimism about the prospects for commodity exports. The boom also brought an acceleration in world inflation. Rising export commodity prices during the 1970's induced many African nations to embark on ambitious debt-financed investment programs. Revenue from sustained

export prices was expected to cover the high repayment of principal and interest.

However, the world recession of the early 1980's depressed world trade, and conservative monetary policies in developed market economies slowed the rate of inflation. Nominal and real prices for most of Africa's export commodities fell steadily from the high levels in the late 1970's until some prices began to recover in 1983.

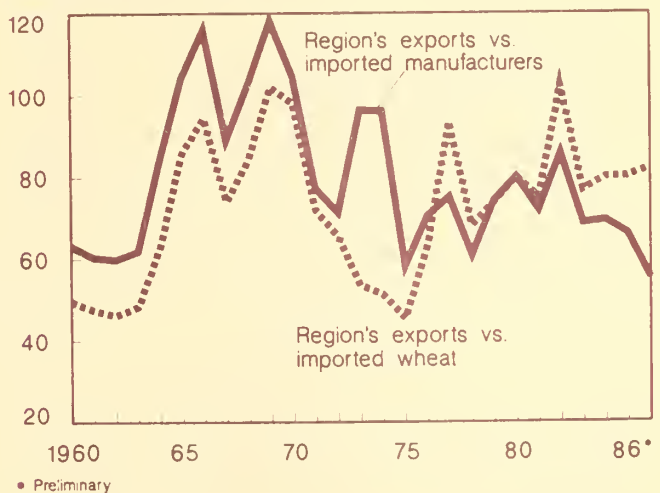
By historical standards most prices remain low. Relative to the prices of imported machinery and other capital goods, they have fallen dramatically. This recent price decline has had a more devastating impact upon debt-ridden African economies than earlier price declines had. Debt-service obligations now "devour" as much as a third of export earnings in many African nations, and there is consequently less foreign exchange available for imports. Furthermore, significant improvements in African export prices and terms of trade against manufactures appear unlikely. However, because of large world grain surpluses, Africa's terms of trade against imported food grain (represented by wheat) have improved slightly since 1983. [David W. Skully (202) 786-1680]

^{1/} W. Arthur Lewis (1978), *The Evolution of the International Economic Order*. Princeton University Press. J. Forbes Munro (1976), *Africa and the International Economy 1800-1960*. J.M. Dent and Sons.

^{2/} Raul Prebisch (1959) "Commercial Policy in the Underdeveloped Countries," *American Economic Review* 49 (May): 251-273.

Terms of Trade (Net of Petroleum) for Sub-Saharan Africa

1969-70=100



IMPORT DEPENDENCY REMAINS HIGH

In 1985, Sub-Saharan Africa imported over 12 million tons of grain. This was only 10 percent below the previous year's record. If the Republic of South Africa is excluded, 1985 is a record, reflecting the impact of the 1984 drought, which significantly reduced food production and raised imports. Over 40 percent of the total was imported by West Africa. East Africa accounted for almost 30 percent of imports and the remainder went to Central and Southern Africa. Wheat imports comprised almost 50 percent of the total, and rice and corn accounted for 22 and 15 percent, respectively. Most of the remaining grain imports were sorghum.

The major determinants of import levels are food production and a country's financial capability to import. In 1986, imports are declining in response to a record level of production in 1985 (see Food Production Recovers from Drought). Also, the worsening financial situation facing this region--reduced prices for its exports and a large debt-service burden--has put pressure on Governments to reduce imports (see Financial Crisis and Policy Reform). These were the primary factors in

Nigeria's decision to ban imports of corn, rice, and vegetable oils. South Africa stopped importing corn as the 1986 crop recovered sufficiently to allow for exports once again.

Food aid has been a major factor in the recent import trend. In 1985, food aid reached a record 5.8 million tons accounting for about half of total grain imports. About 40 percent of the aid was shipped to Ethiopia and Sudan, since they were among the hardest hit by the 1983-84 drought. About 45 percent of the food aid shipped to Sub-Saharan Africa was wheat. An unusually high proportion about 20 percent was sorghum. Food aid shipments are declining in 1986 because improved production has reduced food import requirements.

Food Aid Has Grown Over 25 Percent Per Year

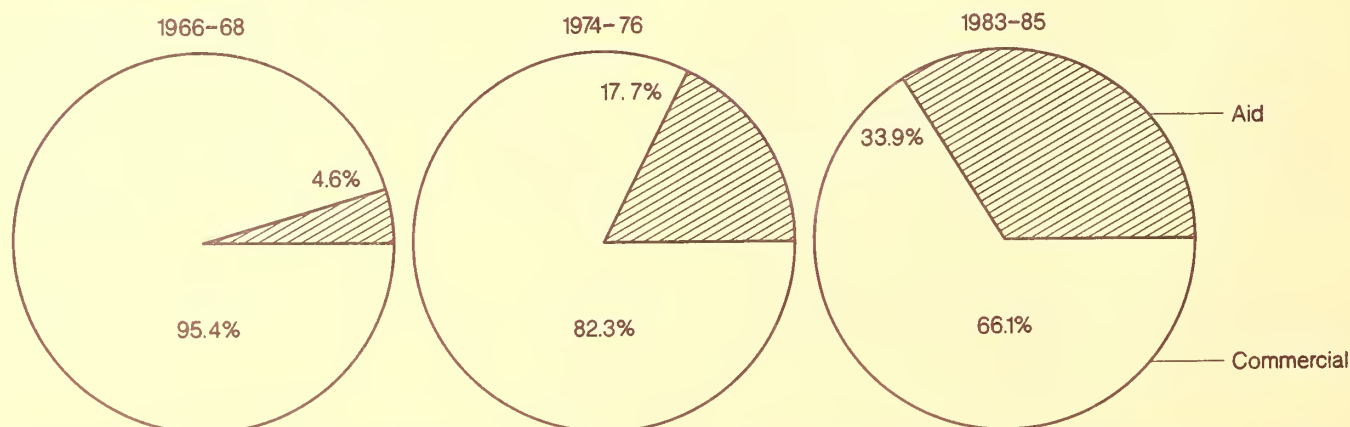
The major import change in the past 20 years has been the increasing importance of food aid, especially in drought years. In the late 1960's, food aid accounted for approximately 5 percent of total grain imports. It increased to 18 percent by the mid-1970's (drought years in the Sahel and East Africa), and to 40 percent in 1983-85. During the past 20 years, food aid has grown over 25 percent per year, while commercial imports have grown only 7 percent.

Since 1980, in response to famine, food aid has increased fivefold, while commercial imports have virtually stagnated. The largest and most consistent increases in food aid have been in wheat and rice. This is due to both

Food aid versus commercial imports

Year	---Wheat---		---Rice---	
	Commercial	Aid Percent	Commercial	Aid
1966-68	99.75	0.25	100.00	0.00
1974-76	83.34	16.66	95.47	4.53
1979-81	74.65	25.35	87.11	12.89
1983-85	64.25	35.75	80.89	19.11

Commercial Imports vs. Food Aid



donor surpluses and the recipients' preferences. Wheat is not produced in most of these countries because of unsuitable land and climate. Even in countries which import commercially, wheat is the dominant import.

West Africa Continues As Largest Importing Region

Historically, West Africa has been the largest importer of grains in Sub-Saharan Africa. Since 1970, Nigeria has been the major importer in the West African sub-region, usually accounting for more than 40 percent of the total. Other large importers include Cameroon, Ivory Coast, and Senegal.

In the past 10 years, Nigeria's imports, all commercial, have increased almost fivefold. Imports rose because production could not keep pace with population growth. From 1973 through 1980, Nigeria experienced tremendous growth in export earnings from oil. As a result, Nigeria was financially able to maintain the high level of import growth. However, trade restrictions were imposed in 1982 when oil revenues declined. Nevertheless, agricultural imports, particularly grain, have not fallen as rapidly as other imports because many food items were considered essential.

Almost all grain imports by Cameroon and Ivory Coast are commercial. The combination of increased oil prices and diversification of exports (especially in Ivory Coast) supported

their growing import bills. Historically, about 85 percent of Senegal's imports were commercial. In 1984 and 1985, though, food aid to Senegal increased in response to falling production, accounting for about 20 percent of total imports.

Southern Africa has also been a large importing region, but in this case many countries contribute to the total. Large importers include Angola, Mozambique, South Africa, and Zambia.

South Africa is essentially self-sufficient and imports only during drought years, as in 1983 and 1984. In 1984, South Africa accounted for 25 percent of Sub-Saharan Africa's grain imports. In a normal year, it accounts for only 3 percent.

Since the late-1970's, Mozambique's imports have been dominated by food aid. In the last 2 years, very little was imported commercially, as the economy has been very weak. Food aid contributed around 90 percent of grain imports in 1984 and 1985.

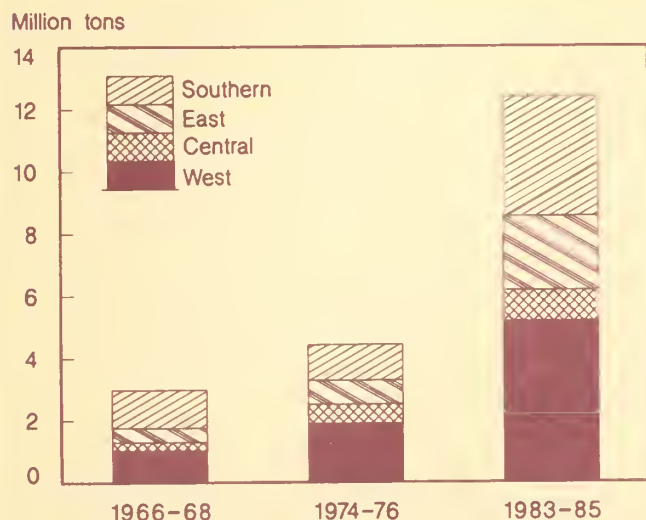
Angola purchases about 90 percent of its imports commercially. Because Angola is one of the largest oil exporters in Africa, foreign exchange has been adequate to finance most imports. However, with the drop in oil prices, Angola may have to cut back on commercial imports and aid may become more important.

East Africa currently accounts for 20 percent of Sub-Saharan Africa's grain imports, a significant increase from 14 percent in the late 1960's. The major importers in this region include Ethiopia, Kenya, Somalia, Sudan, and Tanzania—all large food aid recipients. Most of the increase in import volume has occurred since the late 1970's, in the form of food aid. Food aid shipments to these five countries have increased almost tenfold since 1979. In 1983–85, food aid accounted for 60 percent of grain imports in Kenya, Sudan, and Tanzania. In Ethiopia, aid contributed 80 percent of grain imports.

Wheat Accounts for Largest Share of Imports

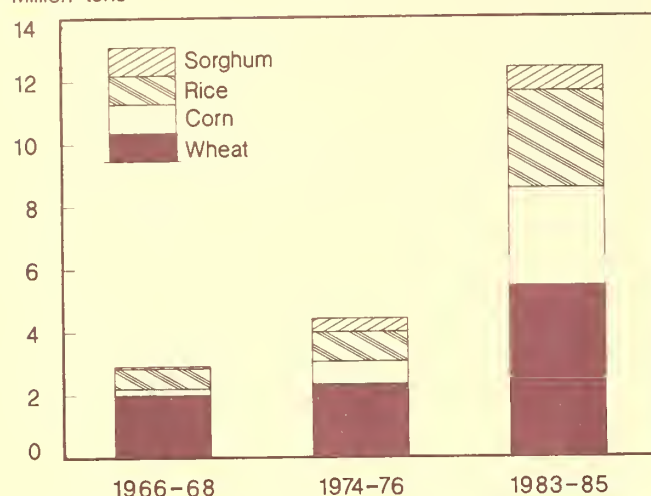
During 1966–85, wheat accounted for more than half of Sub-Saharan Africa's grain imports. This share did decline, however,

Regional Composition of Cereal Imports



Composition of Sub-Saharan Africa's Cereal Imports

Million tons



going from more than 60 percent in the late 1960's to around 50 percent in 1983-85 because of the increase in corn imports.

Between 1980 and 1985, wheat imports grew quite rapidly, compared with other grains, and became vital to continued increases in consumption. Excluding South Africa, per capita consumption increased from 10 kilograms in the late 1960's to 16 in 1983-85. At the same time, per capita production declined. Therefore, the expanded consumption was entirely due to greater imports--mostly concessional.

Since the late 1970's, wheat aid has been on the rise, so that it now comprises about one-third of total wheat imports. The increasing trend for both commercial and concessional wheat imports has varied little. Wheat aid, however, has grown at a much faster pace--about 40 percent annually since 1966, compared with commercial import gains of about 6 percent.

In 1983-85, imports accounted for only about 10 percent of total corn availability. Unlike wheat, corn is a major domestic crop in Sub-Saharan Africa, and imports were mainly due to production shortfalls. Perhaps the best example of this situation occurred recently when South Africa's corn output fell to the lowest in a decade and imports increased over 80 percent between 1983 and 1984.

Historically, corn imports have been extremely volatile, depending on domestic

output. Only recently has food aid played a considerable role in corn imports. Since 1980, it has increased 12 percent per year, so that in 1983-85, it accounted for about one-quarter of total corn imports. This was in response to production failures in Southern Africa.

Rice imports are similar to wheat in that they constitute an important share of available supply. In 1983-85, imports accounted for about one-third of rice availability in Sub-Saharan Africa. Rice imports are also important to total grain imports; since 1966, they have grown over 9 percent annually, so that they now account for over 27 percent of the total. Historically, West Africa has been the major rice importer, accounting for more than half of all the region's rice imports. The West African imports are mainly distributed among Cameroon, Ivory Coast, Nigeria, and Senegal.

Food aid has played a large part in the increase of rice imports. Since the late 1970's, commercial rice imports have stagnated; food aid has become an important component of the total, increasing more than threefold. Currently, 20 percent of rice imports are concessional.

Most of the remaining grain imports consist of sorghum. Millet and sorghum are very important in domestic production and consumption, but imports are not a factor (except in 1985) because the region is virtually self-sufficient.

Agricultural Import Bill Increasing

Sub-Saharan Africa's agricultural imports averaged over \$7 billion in 1982-84, with the total growing over 10 percent annually since 1969. Cereals have accounted for the largest portion, and their share has increased through the years. In the early 1970's, cereals made up just over 20 percent of import value, compared with almost 40 percent in 1982-84. The most significant growth was in oilseeds and oilseed products, at over 20 percent per year. However, these commodities still account for only about 10 percent of total agricultural imports.

Meat and dairy products imports, which are usually added to the diet when incomes rise, rose through 1980. However, as revenues

began to decline in 1981, imports of these commodities followed suit. Their share of total agricultural import value did not change much during 1969-84, with meat and dairy accounting for 17 and 15 percent, respectively, of the total.

With increasing import bills, regional governments are trying to institute changes to reduce their burden. One common policy reform is currency devaluation. Until very recently, governments were supporting imports with overvalued exchange rates which made imports cheaper. Since 1980, however, about one-third of the Sub-Saharan countries have devalued their currencies. As a result, the prices of their imported commodities have risen. For example, in Somalia, the wheat price in the local currency has increased almost 40 percent per year since 1981; in Zaire, the wheat price has risen over 50 percent annually since 1979. In time, these steeper prices will discourage imports. Prices rose very little in the countries that did not devalue. The Ivory Coast currency, like many others in West Africa, is pegged to the French franc and was not devalued. In Ivory Coast, the wheat price has increased only about 8 percent per year since 1980, and therefore has not significantly discouraged imports.

U.S. Exports to Region Declining in 1986

For fiscal 1986, U.S. agricultural exports to Sub-Saharan Africa are forecast at about

\$800 million, a 36-percent decline from the near-record \$1.3 billion in 1985. Most of the reduction is in grains, a result of lower import requirements and lower world prices.

U.S. exports of coarse grains are forecast to decline by almost 2 million tons, to 250,000. This is an 85-percent value reduction from last year. The principal reason is the halting of corn imports by South Africa and reduced imports by Nigeria. U.S. rice exports to the region are expected to drop by more than 30 percent, almost entirely due to a volume reduction, since prices will change very little. (Prices for 1985 U.S. exports were already low because of concessional programs.) The value of U.S. exports of wheat and wheat products will drop about 25 percent, but wheat will remain the top export to this region, accounting for more than 40 percent of the total.

U.S. exports to Nigeria are expected to drop by more than 40 percent, because of two factors: 1) the Government banned imports of corn, rice, and vegetable oils, and 2) there were delays in issuing import licenses for wheat. U.S. exports to South Africa are forecast down by 55 percent, placing South Africa as the third largest importer of U.S. farm commodities in the region. Most of the reduction is due to the elimination of corn imports.

Food aid will continue to play a large part in U.S. exports to East Africa, but not to the same degree as last year. As food shortages

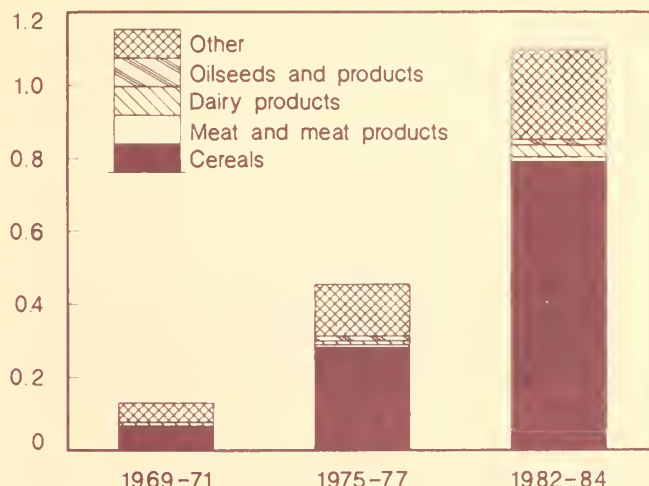
Commodity Composition of Sub-Saharan Africa's Agricultural Imports

\$ billion



Commodity Composition of U.S. Agricultural Exports to Region

\$ billion



persist in Ethiopia, it is expected to become the second largest market for U.S. agricultural commodities in the region. Exports to Sudan will be cut in half, because domestic sorghum and millet production reached records. Nigeria, South Africa, Ethiopia, and Sudan account for 60 percent of U.S. agricultural exports to the region.

Future Imports Highly Dependent On Financial Situation

The two primary sources of import financing are export earnings and foreign credit. The recent export picture has not been very bright for this region. Export earnings peaked in 1980 and since then reserves have been drawn down. Most of these countries depend on one export commodity for their revenues. These commodities (such as coffee, cocoa, sugar, copper) have little potential for increased future demand and their prices peaked in the late 1970's. The recent downward trend in oil prices will force the oil exporters in the region (Nigeria, Angola, Cameroon) to reduce their imports. Conversely, lower oil prices will help the oil importers, freeing funds for other imports. These savings, plus lower interest rates, could aid in the recovery of some of the economies in the region.

When foreign exchange is not adequate to fund imports, governments seek external financing. Prospects for continued credit are not good. The creditworthiness of the region, on the whole, has declined. This, combined

with the bleak export picture, will force governments to restrict imports.

In study estimates for 21 Sub-Saharan countries (representative of the entire region in that they include oil exporters as well as importers) results showed that reduced export earnings and credit would substantially cut imports (see forthcoming Foreign Agricultural Economic Report, "Financial Constraints and Import Response in Africa", December 1986). On average, a 1-percent decline in credit, estimates showed, will decrease imports by 0.58 percent; a 1-percent decline in export earnings will cut imports by 0.67 percent.

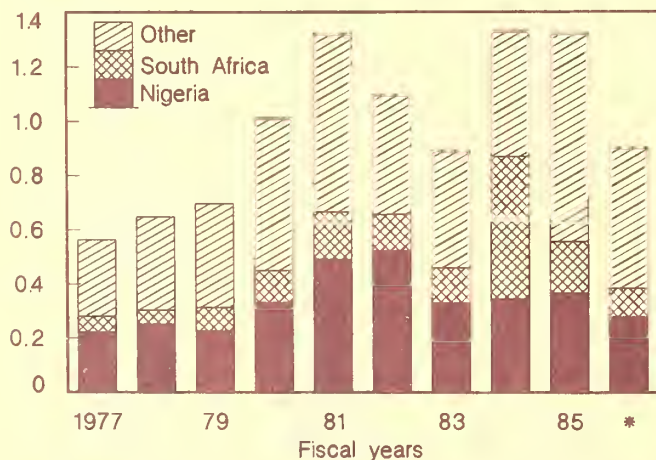
However, reducing food imports is usually a government's last resort because of the political repercussions. As a result, recent import restrictions have come in the area of luxury items and manufactured goods rather than in agricultural products. However, if the financial condition of these countries deteriorates further, some agricultural imports may have to be eliminated.

Prospects for U.S. Share of Sub-Saharan Import Market

Since 1969, the U.S. share of Sub-Saharan agricultural imports has increased marginally to about 15 percent. The United States supplies as much as 30 percent of the region's cereal imports; much of this is due to large food aid shipments. The outlook for U.S. exports in this market depends on many factors, the first, competition.

U.S. Agricultural Exports to Sub-Saharan Africa

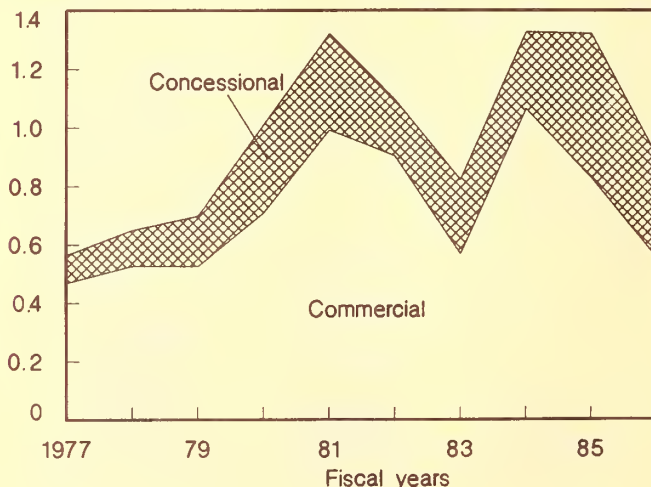
\$ billion



* 1986 forecast.

U.S. Agricultural Exports to Sub-Saharan Africa Commercial and Concessional

\$ billion



The EC has emerged as a major supplier to Sub-Saharan Africa. Since 1980, the EC has supplied this region with one-third of its imports. The EC does, however, have an advantage over the United States by being closer politically and geographically to the region.

Brazil and Argentina have taken away part of the market share the United States enjoyed in oilseeds. This trend should continue as the region's importers seek less expensive suppliers and more exporters enter the market. As the number of suppliers increases, the use of nonprice competition will become even more prevalent.

The value of the dollar is also important in determining the U.S. share. In recent years, with the value very high, U.S. exports were relatively expensive. However, as the dollar's value began to decline, U.S. goods became more competitive.

Prospects for a greater U.S. share should be improved by the Food Security Act of 1985, which provides for export promotion through more price competition, encouraging the reduction of trade barriers, and expanding credit programs. A lower U.S. price will boost the U.S. share because overall imports by the region will grow very slowly, constrained by finances and the policy adjustments advocated by international financial institutions. [Stacey Rosen (202) 786-1680]



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U.S. agricultural imports from Sub-Saharan Africa, by value and quantity,
for selected items, 1984 and 1985

Destination	Total agricultural		Coffee		Sugar		Cocoa and products		Tea		Tobacco	
	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985
\$ thousand												
VALUE												
Angola	873	0	873	0	0	0	0	0	0	0	0	0
Benin	0	0	0	0	0	0	0	0	0	0	0	0
Botswana	87	40	0	0	0	0	0	0	0	0	0	0
Burkina	10	258	0	0	0	0	0	0	0	0	0	0
Burundi	1,573	1,022	1,573	1,022	0	0	0	0	0	0	0	0
Cameroon	20,975	19,967	14,064	14,183	0	0	1,558	1,259	0	3	5,353	4,507
CAR	1,170	314	931	0	0	0	0	0	0	0	239	295
Comoros	2,127	6,169	0	0	0	0	0	0	0	0	0	0
Congo (Brazzav)	3,448	3,289	0	0	3,448	3,289	0	0	0	0	0	0
Ethiopia	81,716	40,671	7	3,5133	3,323	0	0	0	0	0	0	0
Gambia	1	0	0	0	0	0	0	0	0	0	0	0
Ghana	17,542	33,935	0	0	0	0	17,542	33,879	0	0	0	0
Guinea	1,939	1,520	1,713	350	0	0	226	0	0	0	0	0
Ivory Coast	403,743	493,346	178,789	141,659	0	3,729	223,756	346,910	0	19	0	0
Kenya	57,060	68,416	28,539	40,650	255	5	0	0	13,931	13,423	0	0
Lesotho	173	58	0	0	0	0	0	0	139	33	0	0
Liberia	65,581	49,314	3,103	1,399	0	0	0	0	0	0	0	0
Madagascar	64,467	49,396	13,337	10,250	6,920	4,777	0	0	0	0	0	0
Malawi	23,367	27,783	43	0	10,373	13,718	0	0	3,046	2,191	9,686	11,662
Mali	59	819	0	0	0	166	37	0	0	39	0	23
Mauritania	12	0	0	0	0	0	0	0	0	0	0	0
Mauritius	15,820	6,971	0	0	14,236	4,312	0	79	624	184	0	0
Mozambique	23,548	14,201	0	0	10,442	3,692	0	0	3,714	1,127	0	0
Niger	0	830	0	0	0	193	0	99	0	0	0	0
Nigeria	20,857	25,591	756	0	0	0	16,854	23,816	0	0	0	0
Rwanda	15,686	5,640	12,420	1,643	0	0	0	2,299	2,553	0	0	0
Senegal	223	160	0	0	0	0	0	0	0	0	0	0
Sierra Leone	22,560	64	22,245	0	0	0	0	0	0	0	0	0
Somalia	554	1,072	0	0	554	470	0	0	0	0	0	0
South Africa	117,213	98,278	0	516	30,869	17,621	1,292	22	944	599	2,298	4,448
Sudan	4,169	2,372	0	0	1,790	0	0	0	0	0	0	0
Swaziland	21,174	8,364	0	0	20,827	6,785	0	40	0	0	0	0
Tanzania	9,781	7,515	1,704	2,756	433	229	0	0	1,074	496	226	214
Togo	33,976	2	33,974	0	0	0	0	0	0	0	0	0
Uganda	92,544	112,484	92,473	112,429	0	0	0	0	50	31	0	0
Zaire	3,419	5,053	1,990	4,094	0	0	0	0	0	0	0	0
Zambia	9	35	0	0	0	0	0	0	0	0	0	0
Zimbabwe	23,134	9,715	4,008	1,573	15,778	5,874	0	0	496	328	2,698	1,904
Total	1,153,432	1,094,864	486,048	365,847	115,925	64,860	261,265	406,104	26,317	21,026	20,500	23,053
1000 tons												
VOLUME												
Angola			300	0	0	0	0	0	0	0	0	0
Benin			0	0	0	0	0	0	0	0	0	0
Botswana			0	0	0	0	0	0	0	0	0	0
Burkina			0	0	0	0	0	0	0	0	0	0
Burundi			524	416	0	0	0	0	0	0	0	0
Cameroon			4,861	5,518	0	0	878	721	0	1	774	774
CAR			335	0	0	0	0	0	0	0	24	94
Comoros			0	0	0	0	0	0	0	0	0	0
Congo (Brazzav)			0	0	7,258	7,500	0	0	0	0	0	0
Ethiopia			25,403	11,683	0	0	0	0	0	0	0	0
Gambia			0	0	0	0	0	0	0	0	0	0
Ghana			0	0	0	0	6,885	14,405	0	0	0	0
Guinea			726	122	0	0	100	0	0	0	0	0
Ivory Coast			68,612	57,056	0	10,787	102,432	151,604	0	9	0	0
Kenya			10,289	15,617	4,301	0	0	0	3,932	4,151	0	0
Lesotho			0	0	0	0	0	0	46	8	0	0
Liberia			1,164	508	0	0	0	0	0	0	0	0
Madagascar			5,014	3,917	14,288	10,847	0	0	0	0	0	0
Malawi			15	0	32,492	35,466	0	0	914	934	3,313	4,068
Mali			0	0	0	91	18	0	0	10	0	0
Mauritania			0	0	0	0	0	0	0	0	0	0
Mauritius			0	0	30,467	9,774	0	18	227	176	0	0
Mozambique			0	0	25,020	8,625	0	0	2,244	692	0	0
Niger			0	0	0	111	0	62	0	0	0	0
Nigeria			276	0	0	0	6,276	10,992	0	0	0	0
Rwanda			4,085	637	0	0	0	0	712	993	0	0
Senegal			0	0	0	0	0	0	0	0	0	0
Sierra Leone			8,385	0	0	0	0	0	0	0	0	0
Somalia			0	0	7,612	9,571	0	0	0	0	0	0
South Africa			0	215	73,525	50,581	1,079	21	295	177	1,055	2,243
Sudan			0	0	33,606	0	0	0	0	0	0	0
Swaziland			0	0	43,070	15,950	0	5	0	0	0	0
Tanzania			558	1,031	7,336	10,502	0	0	354	268	298	304
Togo			11,982	0	0	0	0	0	0	0	0	0
Uganda			34,194	44,327	0	0	0	0	21	10	0	0
Zaire			745	1,619	0	0	0	0	0	0	0	0
Zambia			0	0	0	0	0	0	0	0	0	0
Zimbabwe			1,320	584	38,337	13,863	0	0	235	171	944	718
Total			178,788	143,250	317,312	183,668	117,668	177,828	8,980	7,600	6,408	8,201

1/ Total U.S. Imports (agricultural and nonagricultural) from Sub-Saharan Africa were \$10.463 billion in 1984 and \$9.441 billion in 1985.

SOURCE: Bureau of the Census

U.S. agricultural exports to Sub-Saharan Africa, by value and quantity, for selected items, 1984 and 1985

Destination	Total		Wheat and wheat flour		Corn		Rice		Inedible tallow		Soybean oil	
	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985
\$ thousand												
VALUE												
Angola	17,810	11,396	0	42	0	55	52	124	2,614	1,300	909	401
Benin	8,371	9,909	0	553	0	0	2,488	137	0	0	485	1,753
Botswana	3,934	7,819	0	0	1,723	231	0	0	0	0	1,221	2,053
Burkina	14,553	21,989	262	0	0	0	2,038	4,080	0	0	3,394	4,209
Burundi	5,018	2,207	1,107	0	0	0	0	0	0	0	998	688
Cameroon	5,478	14,588	0	0	0	0	31	2,602	1,108	0	112	2,084
CAR	339	462	0	0	0	0	4	0	0	0	0	122
Chad	3,618	16,552	0	200	0	369	1,415	1,323	0	0	467	5,879
Congo (Brazzav)	1,936	809	0	0	0	0	589	132	0	0	0	0
Djibouti	3,965	32	0	0	0	0	3,060	0	0	0	275	0
Ethiopia	21,115	163,528	3,990	20,025	7	175	25	171	0	0	6,420	23,692
Gabon	753	838	0	0	0	0	713	347	0	0	0	0
Gambia	4,153	3,256	580	26	0	0	2,534	2,106	0	0	577	402
Ghana	24,454	29,816	10	5,967	45	3	1,525	5,685	1,760	0	6,014	2,962
Guinea	9,124	11,288	132	805	0	0	6,500	7,973	0	0	269	155
Ivory Coast	7,998	9,782	0	67	0	13	2,346	852	0	0	832	401
Kenya	22,824	41,232	4,743	10,916	7,251	23,701	608	19	1,637	380	1,486	1,036
Lesotho	10,928	5,415	3,069	409	0	0	0	0	0	0	2,951	1,381
Liberia	34,456	26,503	2,907	2,005	11	0	27,025	20,442	0	0	29	22
Madagascar	13,604	16,180	793	0	0	0	9,670	11,688	03	83	2,347	3,395
Malawi	586	734	0	0	0	0	0	0	481	513	93	0
Mali	9,816	21,631	303	520	806	4,528	6,268	11,419	0	0	335	123
Mauritania	16,235	20,978	1,732	2,795	0	0	70	112	0	0	685	768
Mauritius	6,133	5,049	301	572	0	0	24	0	0	0	4,813	2,611
Mozambique	12,186	35,809	0	4,925	6,254	14,220	0	9,601	0	0	0	18
Niger	1,110	12,306	8	0	0	5	10	0	0	0	0	0
Nigeria	349,050	313,151	256,012	225,920	13,236	13,023	10,180	56	19,760	18,791	261	339
Rwanda	5,245	3,581	168	119	419	0	531	248	0	0	1,377	1,104
Senegal	5,752	26,564	710	114	2,401	15	748	14,077	1,044	266	1,185	1,909
Sierra Leone	6,046	6,639	2,358	2,005	0	0	1,452	2,144	0	0	656	523
Somalia	32,561	39,000	6,717	10,130	3,498	3,799	5,500	4,998	68	0	10,129	13,228
South Africa	481,339	108,389	4,851	1,714	366,140	30,282	52,560	25,089	5,146	7,460	3,593	3,111
Sudan	61,666	170,784	52,078	77,852	13	16	84	57	4,470	4,029	185	13,164
Tanzania	8,350	16,463	60	50	0	0	114	149	0	0	3,612	5,888
Togo	6,891	8,672	1,690	1,977	219	58	414	327	0	0	890	1,803
Uganda	220	678	0	0	0	0	0	0	0	0	0	191
Zaire	17,238	24,668	12,997	16,121	848	0	2,155	0	0	0	0	0
Zambia	15,700	6,539	2,686	4,828	4,803	0	2,452	0	0	0	5,492	1,313
Zimbabwe	7,906	6,394	0	3,914	5,990	0	16	0	815	0	0	256
Total	1,288,461	1,221,630	360,264	394,571	413,664	90,493	143,201	125,958	38,903	33,122	62,092	96,984
1000 tons												
VOLUME												
Angola	0	0	204	0	0	398	175	404	4,624	2,500	901	408
Benin	0	1,924	0	0	0	0	12,348	299	0	0	480	1,926
Botswana	0	0	0	0	11,373	1,500	0	0	0	0	1,085	2,235
Burkina	1,642	0	0	0	0	0	10,192	29,083	0	0	3,644	4,702
Burundi	6,520	0	0	0	0	0	0	0	0	0	980	772
Cameroon	0	0	0	0	0	0	53	9,576	2,094	0	120	2,377
CAR	0	0	0	0	0	0	5	0	0	0	0	120
Chad	0	2,482	0	2,499	5,000	5,000	0	0	0	0	500	5,802
Congo (Brazzav)	0	0	0	0	2,139	499	0	0	0	0	0	0
Djibouti	0	0	0	0	0	0	9,051	0	0	0	289	0
Ethiopia	24,759	146,660	109	2,045	72	557	0	0	0	0	6,774	27,753
Gabon	0	0	0	0	1,555	713	0	0	0	0	0	0
Gambia	2,684	143	0	0	8,937	7,134	0	0	0	0	600	438
Ghana	89	33,712	169	18	5,276	18,522	2,520	0	0	0	6,022	3,503
Guinea	598	4,770	0	0	22,219	25,778	0	0	0	0	280	171
Ivory Coast	0	403	0	150	6,684	1,828	0	0	0	0	890	441
Kenya	29,998	86,768	51,291	200,490	2,134	18	3,274	999	1,577	1,165	1,577	1,165
Lesotho	18,445	2,018	0	0	0	0	0	0	0	0	3,105	1,457
Liberia	17,924	13,875	71	0	81,336	65,251	0	0	0	0	22	15
Madagascar	3,488	0	0	0	33,465	44,380	0	1,000	2,494	3,987	0	0
Malawi	0	0	0	0	0	0	0	965	1,000	100	0	0
Mali	1,699	3,206	4,868	34,131	28,436	54,140	0	0	0	351	137	0
Mauritania	10,589	17,901	0	0	286	365	0	0	0	726	845	0
Mauritius	1,361	5,100	0	0	73	0	0	0	0	7,449	3,424	0
Mozambique	0	31,611	38,736	112,085	0	32,869	0	0	0	0	18	0
Niger	36	0	62	18	0	0	0	0	0	0	0	0
Nigeria	1,617,316	1,473,499	86,695	93,620	22,463	50	38,282	37,150	245	412	0	0
Rwanda	802	529	2,503	0	1,805	938	0	0	1,475	1,193	0	0
Senegal	4,827	1,097	14,999	76	3,376	125,051	2,193	689	1,222	2,119	0	0
Sierra Leone	14,391	14,514	0	0	5,882	6,597	0	0	686	558	0	0
Somalia	34,109	52,054	20,529	23,818	18,791	16,802	102	0	10,622	13,933	0	0
South Africa	31,856	16,671	2,528,600	245,854	129,317	65,878	10,028	15,616	4,317	3,785	0	0
Sudan	308,977	504,357	71	73	304	214	10,555	10,187	200	13,614	0	0
Tanzania	182	144	0	0	394	528	0	0	3,941	8,856	0	0
Togo	11,783	26,302	1,395	473	826	806	0	0	910	1,972	0	0
Uganda	0	0	0	0	0	0	0	0	0	263	0	0
Zaire	81,208	113,838	5,034	0	8,060	0	0	0	0	0	0	0
Zambia	17,421	38,377	32,743	0	6,952	0	0	0	8,537	2,153	0	0
Zimbabwe	0	26,900	43,096	0	82	0	1,528	0	0	286	0	0
Total	2,242,704	2,619,059	2,842,282	717,292	427,706	513,280	76,165	69,141	70,544	110,840	0	0

1/ Total U.S. exports (agricultural and nonagricultural) to Sub-Saharan Africa totaled \$4.422 billion in 1984 and \$3.757 billion in 1985.

SOURCE: Bureau of the Census

Indices of agricultural and food production in Sub-Saharan Africa

	Total agricultural production					Per capita agricultural production				
	1981	1982	1983	1984	1985 1976-78=100	1981	1982	1983	1984	1985
Angola	91	94	92	91	92	79	79	76	73	72
Benin	98	98	95	122	134	87	84	79	99	105
Burkina	112	114	109	105	133	104	103	96	90	111
Burundi	115	106	114	104	112	103	93	96	85	90
Cameroon	105	103	95	108	113	94	90	81	90	91
Ethiopia	108	119	109	100	104	102	110	98	88	91
Ghana	101	96	86	106	111	95	89	74	87	88
Guinea	99	106	104	109	119	92	96	92	93	95
Ivory Coast	132	130	113	151	156	112	106	88	114	113
Kenya	110	113	116	119	120	93	92	90	89	86
Liberia	111	107	111	120	119	97	91	91	96	92
Madagascar	103	105	108	110	112	92	92	91	90	90
Malawi	113	124	121	127	130	100	107	100	102	101
Mali	116	118	113	97	118	106	105	98	83	99
Mozambique	111	109	86	92	103	99	95	73	77	84
Niger	115	115	116	77	113	102	99	96	61	88
Nigeria	112	114	100	113	117	99	97	84	93	93
Rwanda	121	127	132	110	126	105	106	105	85	93
Senegal	110	115	83	90	103	96	98	69	72	80
Sierra Leone	98	100	104	96	98	89	88	90	81	80
Rep. So. Africa	119	107	94	102	110	108	94	81	86	90
Sudan	110	99	102	94	132	96	83	82	74	98
Tanzania	108	106	108	107	116	95	90	89	86	89
Togo	119	118	110	125	134	105	102	92	101	105
Uganda	97	107	112	118	121	87	93	95	97	97
Zaire	112	116	119	115	120	100	100	100	95	96
Zambia	106	98	111	116	127	93	83	91	91	97
Zimbabwe	108	103	90	108	130	96	88	74	85	101
Sub-Saharan Africa	112	112	105	110	118	100	97	89	91	94
Sub-Sahara less Rep. So. Africa	111	113	106	111	119	99	97	90	91	95
	Total food production					Per capita food production				
	1981	1982	1983	1984	1985 1976-78=100	1981	1982	1983	1984	1985
Angola	98	101	101	100	101	85	85	83	80	79
Benin	99	97	92	115	126	87	83	77	93	99
Burkina	112	113	107	102	131	104	102	94	87	109
Burundi	106	106	108	101	107	95	93	92	83	85
Cameroon	102	98	96	103	110	92	86	82	85	89
Ethiopia	108	123	111	102	106	102	113	99	89	93
Ghana	101	96	86	106	111	95	89	74	87	88
Guinea	99	106	103	109	119	91	96	92	93	96
Ivory Coast	141	135	132	159	166	120	110	103	120	120
Kenya	105	115	113	100	114	89	93	89	75	82
Liberia	114	115	122	127	129	100	98	100	101	99
Madagascar	101	104	109	108	110	90	90	92	89	88
Malawi	115	124	121	125	126	102	106	101	100	98
Mali	120	120	113	96	117	110	107	99	82	97
Mozambique	111	110	86	93	104	99	96	73	78	84
Niger	116	116	117	77	113	102	99	96	61	88
Nigeria	113	115	101	114	117	99	98	84	93	94
Rwanda	121	127	132	110	126	104	106	105	84	93
Senegal	110	115	83	91	103	97	98	69	72	80
Sierra Leone	97	98	103	96	97	88	86	89	80	79
Rep. So. Africa	121	107	93	102	109	109	94	80	85	90
Sudan	119	98	97	86	132	103	82	78	67	98
Tanzania	110	109	112	112	121	96	93	92	90	94
Togo	116	114	106	121	130	103	98	89	98	102
Uganda	101	108	113	117	120	90	94	96	96	95
Zaire	112	117	119	115	120	100	101	100	95	96
Zambia	105	98	111	110	120	93	84	91	87	92
Zimbabwe	112	101	78	89	124	99	87	65	71	96
Sub-Saharan Africa	113	112	105	109	118	101	97	89	90	94
Sub-Sahara less Rep. So. Africa	111	113	106	110	119	99	98	90	90	95

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